06-26-00   PCT

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U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER
P02005US0

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

09/582486

INTERNATIONAL APPLICATION NO. PCT/GB98/03860	INTERNATIONAL FILING DATES 24 December 1998	PRIORITY DATE CLAIMED 24 December 1997 24 June 1998

TITLE OF INVENTION MODIFIED DEACETOXYCEPHALOSPORIN C SYNTHASE (DAOCS) AND X-RAY STRUCTURE

APPLICANT(S) FOR DO/EO/US Christopher Joseph Schofield; Jack Edward Baldwin; Peter L. Roach; Matthew D. Lloyd; Karl Harlos; Inger Andersson; Janos Hajdu; Anke S. Terwisscha Van Scheltinga; Karin Valegard; and S. Ramaswamy

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [X] This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371

2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.

3. [ ] This express request to begin national examination procedures (35 U.S.C. 371 (f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371 (b) and PCT Articles 22 and 39(1).

4. [X] A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed.

5. [X] A copy of the International Application as filed (35 U.S.C. 371 (c)(2))

   a. [X] is transmitted herewith (required only if not transmitted by the International Bureau).

   b. [ ] has been transmitted by the International Bureau.

   c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US).

6. [ ] A translation of the International Application into English (35 U.S.C. 371 (c)(2)).

7. [X] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))

   a. [ ] are transmitted herewith (required only if not transmitted by the International Bureau).

   b. [ ] have been transmitted by the International Bureau.

   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.

   d. [X] have not been made and will not be made.

8. [ ] A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).

9. [ ] An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).

10. [ ] A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. [X] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 & 3.31 is included.

13. [X] A FIRST preliminary amendment.

   [ ] A SECOND or SUBSEQUENT preliminary amendment.

14. [ ] A substitute specification.

15. [X] A change of power of attorney and/or address letter.

16. [X] Other items or information: Sequence Listing and Diskette

EXPRESS MAIL LABEL NO. EK102712205US

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
09/582486	PCT/GB98/03860	P02005US0

17. [X] The following fees are submitted:

CALCULATIONS PTO USE ONLY

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) – (5)):

[ ] Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO . . . .

[X] International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO . . . . .

[ ] International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO . . . .

[ ] International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) . . . .

[ ] International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) . . . .

ENTER APPROPRIATE BASIC FEE AMOUNT =	$970.00	

Surcharge of _____ for furnishing the oath or declaration later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	232 - 20 =	212	X 18	3,816.00	
Independent claims	13 - 3 =	10	x 78	780.00	
MULTIPLE DEPENDENT CLAIM(s) (if applicable)			x	-0-	
TOTAL OF ABOVE CALCULATIONS =				5,566.00	

Reduction of ½ for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).

SUBTOTAL =	5,566.00	

Processing fee of _____ for furnishing the English translation later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).   +

TOTAL NATIONAL FEE =	5,566.00	

Fee for recording the enclosed assignment (37 CFR 1.21 (h)). Assignment must be accompanied by appropriate cover sheet (37 CFR 3.28, 3.31)   + (_____ per property).

TOTAL FEES ENCLOSED =	$5,566.00	

Amount to be:
Refunded

Charged

a. [ ] A check in the amount of _____ to cover the above fees is enclosed.

b. [X] Please charge my Deposit Account No. 06-2375 in the amount of $5,566.00 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. [X] The Commissioner is hereby authorized to charge any additional fees which may be required or credit any overpayment to my Deposit Account No. 06-2375 . A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:
Melissa D. Schwaller
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1301 McKinney, Suite 5100
Houston, TX 77010-3095

6-23-00

Melissa D. Schwaller
Melissa D. Schwaller
46,089
REGISTRATION NUMBER

EXPRESS MAIL LABEL NO. EK102712205US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:	To be assigned	§ Docket No.: P02005US0
		§
Filing Date:	June 16, 2000	§
		§
Applicants:	C. Schofield *et al.*	§
		§
Title:	Modified Deacetoxycephalosporin C Synthase (DAOCS) and X-Ray Structure	§ § §

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Applicants respectfully request the entry of the present statement in regard to the enclosed sequence listing in the above-referenced application. The submitted materials include a computer readable form and paper copy of a sequence listing for the sequence found in the application(SEQ ID NO: 1). Applicants state the information recorded in the computer readable form of the sequence listing is identical to the written sequence listing. Applicants also state that the submission, filed in accordance with 37 CFR 1.821(g), does not include new matter. The sequence found in the sequence listing is identical to that found in the application.

If you have any questions regarding the above-referenced application, please do not hesitate to contact me.

Respectfully submitted,

Melissa D. Schwaller

Melissa D. Schwaller, Ph.D.
Registration No. 46,089

Date: 6-23-00

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Express Mail Label No. EK102712205US

SEQUENCE LISTING

<110> SCHOFIELD, Christopher J.
       BALDWIN, Jack E.
       LLOYD, Matthew D.
       HARLOS, Karl
       ANDERSSON, Inger
       TERWISSCHA VAN SCHELTINGA, Anke S.
       VALEGARD, Karin
       RAMASWAMY, S.

<120> MODIFIED DEACETOXYCEPHALOSPORIN C SYNTHASE (DAOCS) AND
       X-RAY STRUCTURE

<130> 08004624

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<141> 1998-12-24

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<150> 9813644.3
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Tyr Leu Thr Asp Cys Gly Leu Thr Asp Thr Glu Leu Lys Ser Ala Lys
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Asp Leu Val Ile Asp Phe Phe Glu His Gly Ser Glu Ala Glu Lys Arg
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Ala Val Thr Ser Pro Val Pro Thr Met Arg Arg Gly Phe Thr Gly Leu

1

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     85   90   95

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    100   105   110

Gly Asp Phe Gly Arg Ile Trp Thr Gln Tyr Phe Asp Arg Gln Tyr Thr
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Pro Asp Gly Gly Val Glu Ala Phe Leu Asp Cys Glu Pro Leu Leu Arg
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Gln Gln Thr Pro Cys Ala Asn Gly Phe Val Ser Leu Gln Ala Glu Val
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Ile Arg Arg Thr Ser Lys Ala
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	C. J. SCHOFIELD ET AL.	:	DOCKET NO.
		:	P02005US0
FILING DATE:	TO BE ASSIGNED	:	
		:	
SERIAL NO.:	TO BE ASSIGNED	:	Gr : To be assigned
		:	
		:	
TITLE:	MODIFIED DEACETOXYCEPHALOSPORIN	:	
	C SYNTHASE (DAOCS) AND X-RAY	:	Examiner:
	STRUCTURE	:	To be assigned

Assistant Commissioner of Patents

Washington, D.C. 20231

FIRST PRELIMINARY AMENDMENT

Dear Sir:

Please enter the following amendments to the claims prior to the examination of the application.

IN THE CLAIMS:

Please amend the claims as follows:

1.   (amended) Deacetoxycephaloporin C synthase (DAOCS) having a structure designated by the X-ray co-ordinates of structure A or structure B [herein].

2.   (amended) DAOCS in the form of a complex with a metal, [e.g. iron or lead, and optionally in the presence of a substrate and/or a substrate analogue or inhibitor,] having a structure designated by the X-ray co-ordinates [herein] of structure B.

3.   (amended) DAOCS as claimed in claim [2] 28, wherein the substrate is selected from the group consisting of penicillin N, penicillin G, 2-oxoglutarate or dioxygen [,and the inhibitor is selected from N-oxalylamino acids, pyridine-carboxylates and nitrous oxide].

4.   (amended) [Use of the three-dimensional structure of DAOCS for the modification of] A method of modifying DAOCS or other related 2-oxoglutarate dependent [enzyme] enzymes comprising referring to the three-dimensional structure of DAOCS to select the modification of said enzymes.

5.   (amended) [Use as claimed in] The method of claim 4, wherein the related 2-oxoglutarate dependent enzyme is DACS, DAOC/DACS or the oxygenase enzyme involved in the introduction of the 7α-methoxy group into cephamycin C.

6.   (amended) [Use as claimed in] The method of claim 5, [for] wherein the modification of DAOCS, DACS or DAOC/DACS is such that they accept unnatural substrates more efficiently than the wild type enzymes.

7.   (amended) [Use as claimed in] The method of claim 5, [for] wherein the modification of DAOCS, DACS, DAOC/DACS is such that they convert natural substrates to pharmaceuticals or useful intermediates in the preparation of pharmaceuticals.

8.   (amended) [Use as claimed in] The method of claim 6, wherein the unnatural substrates are penicillins [including penicillin G, penicillin V, 6-aminopenicillanic acid, amoxycillin, or penicillins with a phenyl glycine or p-hydroxyphenyl glycine side chain].

9.   (amended) [Use as claimed in] The method of claim 6, wherein the unnatural substrate is a cephalosporin.

10.   (amended) [Use as claimed in] The method of claim 6, wherein the unnatural substrate is an amino acid or a peptide.

11.   (amended) [Use as claimed in any one of claims] The method of claim 6[-8], wherein [penicillin G, penicillin V, another] unnatural substrate [or penicillin N] is converted to a cephalosporin [or exomethylene cephalosporin].

12.   (amended) An enzyme having significant [(as herein defined)] sequence similarity to DAOCS, wherein the side chain binding site of [penicillin N or] DAOC is modified and at least one amino acid residue [and] at [at least] one or more of the following sites [at least one amino acid residue] selected from the group consisting of Thr72, Arg74, Arg75, Glu156, Leu158, Arg160, Arg162, Leu186, Ser187, Phe225, Phe264, Arg266, Asp301, Tyr302, Val303, and Asn304; is changed to another amino acid residue or is deleted[: Thr72, Arg74, Arg75, Glu156, Leu158, Arg160, Arg162, Leu186, Ser187, Phe225, Phe264, Arg266, Asp301, Tyr302, Val303,

and Asn304; and/or at least one additional amino acid residue is inserted within the region 300-311; provided that other residues interacting with the above may be changed in order to accommodate the change in one of the above].

13.   (amended) An enzyme having significant [(as herein defined)] sequence similarity to DAOCS, wherein the penicillin/cephalosporin binding site of [penicillin N or] DAOC is modified [and at] at [least] one or more of the following amino acid residues selected from the group consisting of Ile 88, Arg160, Arg162, Phe164, Met180, Thr190, Ile192, Phe225, Pro241, Val245, Val262, Phe264, Ile305, Arg 306, and Arg307; is changed or deleted: [Ile 88, Arg160, Arg162, Phe164, Met180, Thr190, Ile192, Phe225, Pro241, Val245, Val262, Phe264, Ile305, Arg 306, and Arg307; and/or at least one additional amino acid residue is inserted within the region 300-311; provided that other residues interacting with the above may be changed in order to accommodate the change in one of the above].

14.   (amended) An enzyme according to claim 12 [or claim 13] which is a [mutant] modification of DAOCS or DACS or DAOC/DACS.

15.   (amended) An enzyme [as claimed in any one of claims 12-14] having significant sequence similarity to DAOCS, wherein both the side chain and the penicillin/cephalosporin binding sites of penicillin N or DAOC are modified and at least one of the residues [specified in claims 12 and 13] selected from the group consisting of Thr72, Arg74, Arg75, Ile88, Glu156, Leu158, Arg160, Arg162, Phe164, Met180, Leu186, Ser187, Thr190, Ile192, Phe225, Pro241, Val245, Val262, Phe264, Arg266, Asp301, Tyr302, Val303, Asn304; Ile305, Arg 306, and Arg307 is changed or deleted [and/or at least one additional amino acid residue is inserted within the region 300-311; provided that other residues interacting with the above may be changed in order to accommodate the change in one of the above].

16. (amended) An enzyme as claimed in [any one of claims] claim 12[-15], wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

17. (amended) A [gene] polynucleotide encoding [for] the enzyme of [any one of claims] claim 12[-16].

18. (amended) A micro-organism capable of expressing the [gene] polynucleotide of claim 17 under fermentation conditions.

19. (amended) [Use of] The method of using the micro-organisms of claim 18 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

20. (amended) [Use as claimed in] The method of claim 19, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway [including isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase].

22. (amended) A method as claimed in claim 21 wherein the said other related 2-osoglutarate dependent enzyme or related enzyme is 1-aminocylopropane-1-carboxylate oxidase, gibberellin C-20 oxidase, flavone synthase, flavanone 3β-hydroxylase, hyoscyamine 6β-hydroxylase, prolyl 4-hydroxylase, prolyl 3-hydroxylase, aspartyl hydroxylase, lysyl hydroxylase, proline hydroxylases, γ-butyrobetaine hydroxylase, enzymes in herbicide resistance mechanisms, clavaminate synthase, and oxygenase enzyme involved in the biosynthesis of carbapenems, the [so called] ethylene forming enzyme from *Pseudomonas syringe*, p-

hydroxyphenylpyruvate dioxgenase, [and] or an oxygenase enzyme involved in the oxidation of phytol in human liver peroxisomes.

23.   (amended) A method as claimed in claim 21 [or 22] wherein the said other enzyme is modified, by deletion or addition or alteration; at one or more of the sites [defined in claim 12 or 13] selected from the group consisting of Thr72, Arg74, Arg75, Ile 88, Glu156, Leu158, Arg160, Arg162, Phe164, Met180, Leu186, Ser187, Thr190, Ile192, Phe225, Pro241, Val245, Val262, Phe264, Arg266, Asp301, Tyr302, Val303, Asn304; Ile305, Arg 306, and Arg307; or using the following information for the design [or] of an inhibitor: Asp185, His183 and His243 act as ligand to the iron; Arg258 and Ser260 and the Fe bind the 2-oxoglutarate; Met180, Phe225, Leu31 and Val245 are close to the iron binding site; Tyr33, Arg160, Arg162, Phe164, Ile192, Gln194, Leu204, Leu223, Leu215 are important for the construction of the part of the active site binding 2-oxoglutarate; and Arg160 and Arg162 are important for binding an amino acid or peptide derived substrate.

24.   (amended) A method as claimed in [any one of claims] claim 21[-23], wherein the said other enzyme is prolyl 4-hydroxylase, prolyl 3-hydroxylase, aspartyl hydroxylase, or lysyl hydroxylase and the inhibitor is to be used for the treatment of human diseases including fibrotic diseases including liver cirrhosis and arthritis.

25.   (amended) A method as claimed in [any one of claims] claim 21[-23], wherein the said other enzyme is p-hydroxyphenylpyruvate dioxygenase and the inhibitor is to be used in the treatment of certain genetic disorders.

26.   (amended) A method as claimed in [any one of claims] claim 21[-23], wherein the said other enzyme is involved in herbicide resistance and the information is to be used to design new herbicides to overcome the problem of resistance.

Please add the following new claims:

27.   The DAOCS of claim 2, wherein said metal is iron or lead.

28.   The DAOCS of claim 2, wherein said complex includes a substrate.

29.   The DAOCS of claim 2, wherein said complex includes a substrate analogue.

30.   The DAOCS of claim 2, wherein said complex includes an inhibitor.

31.   DAOCS as claimed in claim 30, wherein the inhibitor is selected from the group consisting of N-oxalylamino acids, pyridine-carboxylates and nitrous oxide.

32.   The method of claim 8, wherein said penicillins are selected from the group consisting of penicillin G, penicillin V, 6-aminopenicillanic acid, amoxycillin, and penicillins with a phenyl glycine or p-hydroxyphenyl glycine side chain.

33.   The method of claim 10, wherein said amino acid is a proteinogenic amino acid.

34.   (amended)   [Use as claimed in any one of claims] The method of claim 6[-8], wherein [penicillin G, penicillin V, another] unnatural substrate [or penicillin N] is converted to a [cephalosporin or] exomethylene cephalosporin.

35.   The method of claim 8, wherein penicillin G, penicillin V or penicillin N is converted to a cephalosporin.

36.   The method of claim 8, wherein penicillin G, penicillin V or penicillin N is converted to an exomethylene cephalosporin.

37.   The enzyme of claim 12,   further comprising the insertion of at least one additional amino acid residue within the region 300-311.

38.   An enzyme having significant sequence similarity to DAOCS, wherein the side chain binding site of DAOC is modified and at least one additional amino acid residue is inserted within the region 300-311.

39.   An enzyme having significant sequence similarity to DAOCS, wherein the side chain binding site of DAOC is modified and at least one amino acid residue at one or more of the following sites selected from the group consisting of Thr72, Arg74, Arg75, Glu156, Leu158, Arg160, Arg162, Leu186, Ser187, Phe225, Phe264, Arg266, Asp301, Tyr302, Val303, and Asn304; is changed to another amino acid residue or is deleted.

40.   The enzyme of claim 12, further comprising the insertion of at least one additional amino acid residue within the region 300-311.

41.   An enzyme having significant sequence similarity to DAOCS, wherein the side chain binding site of penicillin N is modified and at least one additional amino acid residue is inserted within the region 300-311.

42.   The enzyme of claim 13, further comprising the insertion of at least one additional amino acid residue within the region 300-311.

43.   An enzyme having significant sequence similarity to DAOCS, wherein the penicillin/cephalosporin binding site of DAOC is modified and at least one additional amino acid residue is inserted within the region 300-311.

44.   An enzyme having significant sequence similarity to DAOCS, wherein the penicillin/cephalosporin binding site of penicillin N is modified at one or more of the following amino acid residues selected from the group consisting of Ile 88, Arg160, Arg162, Phe164, Met180, Thr190, Ile192, Phe225, Pro241, Val245, Val262, Phe264, Ile305, Arg 306, and Arg307; is changed or deleted .

45.   The enzyme of claim 13, further comprising the insertion of at least one additional amino acid residue within the region 300-311.

46.   An enzyme having significant sequence similarity to DAOCS, wherein the penicillin/cephalosporin binding site of DAOC is modified and at least one additional amino acid residue is inserted within the region 300-311.

47.   The enzyme of claim 15, further comprising the insertion of at least one additional amino acid residue within the region 300-311.

48.   An enzyme having significant sequence similarity to DAOCS, wherein both side chain and the penicillin/cephalosporin binding site of DAOC are modified and at least one additional amino acid residue is inserted within the region 300-311.

49.   An enzyme according to claim 13 which is a modification of DAOCS or DACS or DAOC/DACS.

50.   An enzyme according to claim 15 which is a modification of DAOCS or DACS or DAOC/DACS.

51.   An enzyme as claimed in claim 13, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

52.   An enzyme as claimed in claim 14, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

53.   An enzyme as claimed in claim 49, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

54.   An enzyme as claimed in claim 15, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

55.   An enzyme as claimed in claim 37, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

56.   An enzyme as claimed in claim 38, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

57.   An enzyme as claimed in claim 39, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

58.   An enzyme as claimed in claim 40, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

59.   An enzyme as claimed in claim 41, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

60.   An enzyme as claimed in claim 42, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

61.   An enzyme as claimed in claim 43, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

62.   An enzyme as claimed in claim 44, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

63.   An enzyme as claimed in claim 45, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

64.   An enzyme as claimed in claim 46, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

65. An enzyme as claimed in claim 47, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

66. An enzyme as claimed in claim 48, wherein two or more complementary mutations are introduced to create or delete a binding interaction, including H-bonds, electrostatic, or hydrophobic interactions.

67. A polynucleotide encoding for the enzyme of claim 13.

68. A polynucleotide encoding for the enzyme of claim 14.

69. A polynucleotide encoding for the enzyme of claim 49.

70. A polynucleotide encoding for the enzyme of claim 15.

71. A polynucleotide encoding for the enzyme of claim 16.

72. A polynucleotide encoding for the enzyme of claim 37.

73.   A polynucleotide encoding for the enzyme of claim 38.

74.   A polynucleotide encoding for the enzyme of claim 39.

75.   A polynucleotide encoding for the enzyme of claim 40.

76.   A polynucleotide encoding for the enzyme of claim 41.

77.   A polynucleotide encoding for the enzyme of claim 42.

78.   A polynucleotide encoding for the enzyme of claim 43.

79.   A polynucleotide encoding for the enzyme of claim 44.

80.   A polynucleotide encoding for the enzyme of claim 45.

81.   A polynucleotide encoding for the enzyme of claim 46.

82.   A polynucleotide encoding for the enzyme of claim 47.

83.   A polynucleotide encoding for the enzyme of claim 48.

84.   A polynucleotide encoding for the enzyme of claim 50.

85.   A polynucleotide encoding for the enzyme of claim 51.

86.   A polynucleotide encoding for the enzyme of claim 52.

87.   A polynucleotide encoding for the enzyme of claim 53.

88.   A polynucleotide encoding for the enzyme of claim 54.

89.   A polynucleotide encoding for the enzyme of claim 55.

90.   A polynucleotide encoding for the enzyme of claim 56.

91.   A polynucleotide encoding for the enzyme of claim 57.

92.   A polynucleotide encoding for the enzyme of claim 58.

93. A polynucleotide encoding for the enzyme of claim 59.

94. A polynucleotide encoding for the enzyme of claim 60.

95. A polynucleotide encoding for the enzyme of claim 61.

96. A polynucleotide encoding for the enzyme of claim 62.

97. A polynucleotide encoding for the enzyme of claim 63.

98. A polynucleotide encoding for the enzyme of claim 64.

99. A micro-organism capable of expressing the polynucleotide of claim 67 under fermentation conditions.

100. A micro-organism capable of expressing the polynucleotide of claim 68 under fermentation conditions.

101. A micro-organism capable of expressing the polynucleotide of claim 69 under fermentation conditions.

102.   A micro-organism capable of expressing the polynucleotide of claim 70 under fermentation conditions.

103.   A micro-organism capable of expressing the polynucleotide of claim 71 under fermentation conditions.

104.   A micro-organism capable of expressing the polynucleotide of claim 72 under fermentation conditions.

105.   A micro-organism capable of expressing the polynucleotide of claim 73 under fermentation conditions.

106.   A micro-organism capable of expressing the polynucleotide of claim 74 under fermentation conditions.

107.   A micro-organism capable of expressing the polynucleotide of claim 75 under fermentation conditions.

108.   A micro-organism capable of expressing the polynucleotide of claim 76 under fermentation conditions.

109.   A micro-organism capable of expressing the polynucleotide of claim 77 under fermentation conditions.

110. A micro-organism capable of expressing the polynucleotide of claim 78 under fermentation conditions.

111. A micro-organism capable of expressing the polynucleotide of claim 79 under fermentation conditions.

112. A micro-organism capable of expressing the polynucleotide of claim 80 under fermentation conditions.

113. A micro-organism capable of expressing the polynucleotide of claim 81 under fermentation conditions.

114. A micro-organism capable of expressing the polynucleotide of claim 82 under fermentation conditions.

115. A micro-organism capable of expressing the polynucleotide of claim 83 under fermentation conditions.

116. A micro-organism capable of expressing the polynucleotide of claim 84 under fermentation conditions.

117. A micro-organism capable of expressing the polynucleotide of claim 85 under fermentation conditions.

118. A micro-organism capable of expressing the polynucleotide of claim 86 under fermentation conditions.

119. A micro-organism capable of expressing the polynucleotide of claim 87 under fermentation conditions.

120. A micro-organism capable of expressing the polynucleotide of claim 88 under fermentation conditions.

121. A micro-organism capable of expressing the polynucleotide of claim 89 under fermentation conditions.

122. A micro-organism capable of expressing the polynucleotide of claim 90 under fermentation conditions.

123. A micro-organism capable of expressing the polynucleotide of claim 91 under fermentation conditions.

124. A micro-organism capable of expressing the polynucleotide of claim 92 under fermentation conditions.

125.   A micro-organism capable of expressing the polynucleotide of claim 93 under fermentation conditions.

126.   A micro-organism capable of expressing the polynucleotide of claim 94 under fermentation conditions.

127.   A micro-organism capable of expressing the polynucleotide of claim 95 under fermentation conditions.

128.   A micro-organism capable of expressing the polynucleotide of claim 96 under fermentation conditions.

129.   A micro-organism capable of expressing the polynucleotide of claim 97 under fermentation conditions.

130.   A micro-organism capable of expressing the polynucleotide of claim 98 under fermentation conditions.

131.   The method of using the micro-organisms of claim 99 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

132. The method of using the micro-organisms of claim 100 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

133. The method of using the micro-organisms of claim 101 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

134. The method of using the micro-organisms of claim 102 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

135. The method of using the micro-organisms of claim 103 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

136. The method of using the micro-organisms of claim 104 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

137. The method of using the micro-organisms of claim 105 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

138. The method of using the micro-organisms of claim 106 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

139. The method of using the micro-organisms of claim 107 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

140.   The method of using the micro-organisms of claim 108 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

141.   The method of using the micro-organisms of claim 109 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

142.   The method of using the micro-organisms of claim 110 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

143.   The method of using the micro-organisms of claim 111 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

144.   The method of using the micro-organisms of claim 112 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

145.   The method of using the micro-organisms of claim 113 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

146.   The method of using the micro-organisms of claim 114 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

147.   The method of using the micro-organisms of claim 115 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

148.   The method of using the micro-organisms of claim 116 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

149   The method of using the micro-organisms of claim 117 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

150.   The method of using the micro-organisms of claim 118 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

151.   The method of using the micro-organisms of claim 119 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

152.   The method of using the micro-organisms of claim 120 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

153.   The method of using the micro-organisms of claim 121 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

154.   The method of using the micro-organisms of claim 122 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

155.	The method of using the micro-organisms of claim 123 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

156.	The method of using the micro-organisms of claim 124 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

157.	The method of using the micro-organisms of claim 125 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

158.	The method of using the micro-organisms of claim 126 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

159.	The method of using the micro-organisms of claim 127 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

160.	The method of using the micro-organisms of claim 128 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

161.	The method of using the micro-organisms of claim 129 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

162.   The method of using the micro-organisms of claim 130 for the production of beta-lactams of the penicillin or cephalosporin (including cepham) families.

163.   The method of claim 131, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

164.   The method of claim 132 wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

165.   The method of claim 133, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

166.   The method of claim 134, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

167.   The method of claim 135, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

168.   The method of claim 136, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

169.   The method of claim 137, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

170. The method of claim 138, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

171. The method of claim 139, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

172. The method of claim 140, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

173. The method of claim 141, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

174. The method of claim 142, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

175. The method of claim 143, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

176. The method of claim 144, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

177. The method of claim 145, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

178. The method of claim 146, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

179. The method of claim 147, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

180. The method of claim 148, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

181. The method of claim 149, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

182. The method of claim 150, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

183. The method of claim 151, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

184. The method of claim 152, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

185.   The method of claim 153, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

186.   The method of claim 154, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

187.   The method of claim 155, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

188.   The method of claim 156, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

189.   The method of claim 157, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

190.   The method of claim 158, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

191.   The method of claim 159, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

192. The method of claim 160, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

193. The method of claim 161, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

194. The method of claim 162, wherein the micro-organism contains another modified enzyme of the penicillin and cephalosporin biosynthesis pathway.

195. The method of claim 163, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

196. The method of claim 164, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

197. The method of claim 165, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

198. The method of claim 166, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

199.   The method of claim 167, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

200.   The method of claim 168, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

201.   The method of claim 169, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

202.   The method of claim 170, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

203.   The method of claim 171, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

204.   The method of claim 172, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

205.   The method of claim 173, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

206.   The method of claim 174, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

207.   The method of claim 175, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

208.   The method of claim 176, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

209.   The method of claim 177, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

210.   The method of claim 178, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

211. The method of claim 179, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

212. The method of claim 180, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

213. The method of claim 181, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

214. The method of claim 182, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

215. The method of claim 183, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

216. The method of claim 184, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-valine (ACV) synthetase.

217.   The method of claim 185, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

218.   The method of claim 186, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

219.   The method of claim 187, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

220.   The method of claim 188, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

221.   The method of claim 189, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

222.   The method of claim 190, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

223.   The method of claim 191, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

224.   The method of claim 192, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

225.   The method of claim 193, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

226.   The method of claim 194, wherein said modified enzyme is isopenicillin N synthase, amidohydrolase/acetyltransferase,   or   L-delta-(aminoadipoyl)-L-cysteine-D-valine   (ACV) synthetase.

227.   A method as claimed in claim 22 wherein the said other enzyme is modified, by deletion or addition or alteration; at one or more of the sites selected from the group consisting of Thr72, Arg74, Arg75, Ile88, Glu156, Leu158, Arg160, Arg162, Phe164, Met180, Leu186, Ser187, Thr190, Ile192, Phe225, Pro241, Val245, Val262, Phe264, Arg266, Asp301, Tyr302, Val303, Asn304; Ile305, Arg 306, and Arg307; or using the following information for the design of an inhibitor: Asp185, His183 and His243 act as ligand to the iron; Arg258 and Ser260 and the Fe bind the 2-oxoglutarate; Met180, Phe225, Leu31 and Val245 are close to the iron binding site; Tyr33, Arg160, Arg162, Phe164, Ile192, Gln194, Leu204, Leu223, Leu215 are important for the

construction of the part of the active site binding 2-oxoglutarate; and Arg160 and Arg162 are important for binding an amino acid or peptide derived substrate.

228. A method as claimed in claim 23, wherein the said other enzyme is prolyl 4-hydroxylase, prolyl 3-hydroxylase, aspartyl hydroxylase, or lysyl hydroxylase and the inhibitor is to be used for the treatment of human diseases including fibrotic diseases including liver cirrhosis and arthritis.

229. A method as claimed in claim 23, wherein the said other enzyme is p-hydroxyphenylpyruvate dioxygenase and the inhibitor is to be used in the treatment of certain genetic disorders.

230. A method as claimed in claim 23, wherein the said other enzyme is involved in herbicide resistance and the information is to be used to design new herbicides to overcome the problem of resistance.

231. A polynucleotide encoding for the enzyme of claim 65.

232. A polynucleotide encoding for the enzyme of claim 66.

REMARKS

Entry of the amendments to the claims before examination of the application is respectfully requested. The claims have been amended for the sake of clarity. No new matter has been added by these amendments. Applicants authorize the Commissioner to charge any

required fees to Deposit Account No. 06-2375, from which the undersigned is authorized to draw.

Respectfully submitted,

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MODIFIED DEACETOXYCEPHALOSPORIN C SYNTHASE (DAOCS) AND X-RAY STRUCTURE

Penicillin and cephalosporin antibiotics are produced either directly by fermentation or by modification of fermentation derived materials containing a beta-lactam ring. The biosynthetic pathway to the penicillins and cephalosporins has been extensively studied and reviewed (J. E. Baldwin and C. J. Schofield, in 'The Chemistry of β-lactams (Ed. M. I. Page), Chapter 1, Blackie, London 1992; Ingolia and Queener, Med. Res. Rev., 1989, 9, 245-264; Aharonowitz, Cohen and Martin, Ann. Rev. Microbiol., 1992, 46, 461-495; Schofield, Bycroft, Baldwin, Hadju, Roach, Current Opinion in Structural Biology, 1997, 7, 857-864) and includes the following steps (Figure 1):

1. Conversion of the tripeptide: L-δ-α-aminoadipoyl-L-cysteinyl-D-valine (ACV) to isopenicillin N in a step catalysed by isopenicillin N synthase (IPNS). This step is common to both penicillin and cephalosporin biosynthesis.

2. In some organisms (*e.g. Penicillium chrysogenum* and *Aspergillus nidulans*) isopenicillin N is converted by exchange of its L-δ-α-aminoadipoyl side chain to penicillins with other side chains, which are normally more hydrophobic than the side chain of isopenicillin N. This conversion is catalysed by an amidohydrolase/ acyltransferase enzyme. Examples of penicillins produced by this biosynthetic process include penicillin G (which has a phenylacetyl side chain) and penicillin V (which has a phenoxyacetyl side chain). These hydrophobic penicillins may be commercially produced via fermentation under the appropriate conditions.

3. In other organisms (e.g. *Streptomyces clavuligerus* and *Cephalosporium acremonium*) isopenicillin N is epimerised to penicillin N. This reaction is catalysed by an epimerase enzyme.

- 2 -

4.   In some organisms (*e.g. S. clavuligerus and C. acremonium*) penicillin N is converted to DAOC. This reaction is catalysed by deacetoxycephalosporin C synthase (DAOCS) in some organisms (e.g. *Streptomyces clavuligerus*) and by deacetoxy/deacetylcephalosporin C

5   synthase (DAOC/DACS) in others (e.g. *C. acremonium*).

5.   In some organisms (e.g. *S. clavuligerus* and *C. acremonium*) DAOC is converted to deacetylcephalosporin C (DAC). This reaction is catalysed by deacetylcephalosporin C synthase (DACS) in some organisms (e.g. *S. clavuligerus*) and by deacetoxy/deacetylcephalosporin

10 C synthase (DAOC/DACS) in others (e.g. *C. acremonium*).

Further biosynthetic steps to give other cephalosporin derivatives may also occur, e.g. in *C. acremonium* DAC may be converted to cephalosporin C and in *Streptomyces spp.* DAC may be converted to cephamycin C. The genes encoding for each of the enzymes catalysing

15 steps 1-6 above have been identified and sequenced.

Fermented penicillins, cephalosporins and their biosynthetic intermediates are useful as antibiotics or as intermediates in the production of antibiotics. Penicillins with hydrophobic side chains may be used for the preparation of cephalosporins or intermediates used in the preparation of

20 cephalosporins, e.g. penicillins (including penicillin G and penicillin V) may be used to prepare C-3 exomethylene cephams which may be used as intermediates in the preparation of the commercial antibiotics, *e.g.* Cefachlor.

The enzymes IPNS, DAOCS, DACS and DAOC/DACS are

25 members of an extended family of Fe(II) utilising oxidase and oxygenase enzymes. Most of this family (including DAOCS, DACS and DAOC/DACS) utilise a 2-oxo acid (normally 2-oxoglutarate) as a cosubstrate in addition to dioxygen and the 'prime' substrate (e.g. penicillin N in the case of DAOCS). Since IPNS, does not use 2-oxoglutarate, it has a substantially different

30 mechanism to the 2-oxoglutarate dependent oxygenases, and this gives

rise to a significantly different active site.

The Invention

This invention is based on the determination of the three

5   dimensional crystal structure of DAOCS and the information and

developments which come from it. The X-ray co-ordinates provide very

detailed 3-dimensional information on the relationships between amino

acid residues in the structure of DAOCS and on the binding modes of the

Fe-cofactor and the substrates to DAOCS. The structure allows the

10   modification of DAOCS and related enzymes of penicillin and

cephalosporin biosynthesis (including DACS and DAOC/DACS) in order to

alter their substrate and product selectivities. Since the DAOCS structures

are the first from the family of 2-oxoglutarate dependent dioxygenases they

also allow for the design of new inhibitors of this family of enzymes.

15   Previously partial overviews of the structures of IPNS complexed to

manganese and IPNS complexed to iron and ACV were reported (Roach

et al., Nature, 1995, 375, 700-704; Roach *et al.*, Nature, 1997, 387, 827).

The structures, as defined by their X-ray co-ordinates, of IPNS complexed

to manganese and in complexes with iron, ACV and/or substrate

20   analogues have been reported in Baldwin, Hajdu, Roach, Hensgens,

Clifton, GB 9621486.1- (Oxygenase Enzymes and Method).

Procedures have been developed for the production of 7-

aminodeacetoxycephaosporin C (7-ADCA) in which recombinant *P.*

chrysogenum strains into which the DAOCS gene has been introduced are

25   used for the production of cephalosporins. In particular if adipic acid is

added to these recombinant strains adipoyl-6-APA is produced, which is

converted by DAOCS into adipoyl-7-ADCA from which the adipoyl side

chain can be removed (EPA-A-0532341, Shibata *et al.*, Bioorg. Med.

Chem. Letts, 1996, 6, 1579-1584).

30   The IPNS gene sequence (and therefore the amino acid

- 4 -

sequence) is related but significantly different to those of DAOCS, DACS, DAOC/DACS. It is likely that gross elements of the fold (i.e. significant elements within the 3-dimensional structure) of these enzymes will be conserved but that the active site architecture will be very significantly

5 different. Structural elements conserved are likely to include the beta-barrel 'jelly roll' core and certain alpha-helices (including alpha helix-10, as defined in Roach et al., Nature, 1995, 375, 700-704). The degree of similarity is insufficient to define the precise structure of DAOCS, DACS, or DAOC/DACS from the IPNS structures. To date no models of DAOCS,

10 DACS, or DAOC/DACS based on the IPNS structure have been reported. Nor have any detailed studies on substrate binding of these enzymes been reported. One report (WO 97/20053) claims the use of products resulting from modification of certain residues in DAOCS for the improved conversion of penicillin G to phenyl acetyl (G)-7-aminocephalosporanic

15 acid.

The three-dimensional structure of DAOCS is defined by the X-ray co-ordinates set out below (Structure A).

Also set out below is a high resolution crystal structure of a complex of prokaryotic DAOCS from S. clavuligerus with Fe(II) and

20 2-oxoglutarate (Structure B).

In part the present invention relates to the use of the structures of DAOCS in order to make modifications to it or DACS or DAOC/DACS in order that the modified enzymes catalyse the conversion of unnatural penicillins (e.g. penicillin G and penicillin V) to cephalosporins

25 more efficiently than the wild-type enzyme. Further aspects of the invention relate to the use of the DAOCS structure in order to produce unnatural products in micro-organisms. Such products include exomethylene cephalosporins, with or without alpha-aminoadipoyl or hydrophobic side chain (e.g. phenylacetyl or phenoxyacetyl). Thus one aspect of this

30 invention refers to the use of the structure of DAOCS for modifying DAOCS

- 5 -

(or the closely related enzymes DACS or DAOC/DACS) in order to:

(i)   permit the enzyme to accept (or accept more efficiently) unnatural penicillin substrates for the preparation of new or commercially valuable antibacterial materials.

5   (ii)   enable the modified enzyme to produce unnatural (e.g. exomethylene cephams) or optimise the production of minor products (e.g. 3-β-hydroxycephams) for use as antibacterials or as intermediates in the preparation of antibacterials or commercially valuable compounds.

                In another aspect this invention provides modified enzymes
10   that result from application of the aforementioned techniques. These are enzymes having significant (as defined below) sequence and thus structural similarity with DAOCS. Thus, structures of these enzymes may be predicted on the basis of the DAOCS structures. Preferably there will be sequence similarity/identity between most of the modified enzyme and a
15   major part of DAOCS. Previous sequence comparisons (Roach *et al.*, Nature, 1995, 375, 700), using pairwise comparisons of the sequences followed by single linkage cluster analysis show that IPNS, DAOCS, DACS and DAOC/DACS cluster with standard deviations scores of >5.0 (Barton and Sternberg, J. Mol. Biol., 1987, **198**, 327). Scores over 5.0 and
20   preferably over 6.0 indicate that the sequence alignments will be correct within all or most of the protein secondary structural elements (Barton, Methods in Enzymol., 1990, **183**, 403); thus they have significantly similar sequences and hence structures. Note there are other criteria which may be used to ascertain significant sequence similarity for example % identity
25   or % similarity of amino acids possessing side chains with similar physico-chemical properties (Barton and Sternberg, J. Mol. Biol., 1987, **198**, 327). Thus, on the basis of sequence comparisons it is possible to predict the structure of one enzyme (e.g. DACS or DAOC/DACS) from another closely related enzyme (e.g. DAOCS). Further, it is recognised that although two
30   enzymes may have structures in which secondary structural elements are

- 6 -

largely or wholly conserved, differences in the structures of the two
enzymes may result from the side chains of the amino acids forming the
secondary structural elements. The effect of these differences, which alter
the substrate/product selectivities of the compared enzymes, is predictable
5   once the three-dimensional structure of one of the enzymes is known.

In another aspect the invention provides an enzyme having
significant (as herein defined) sequence similarity to DAOCS wherein the
side chain binding site of penicillin N or DAOC is modified and at at least
one of the following sites at least one amino acid residue is changed to
10   another amino acid residue or is deleted: Thr72, Arg74, Arg75, Glu156,
Leu158, Arg160, Arg162, Leu186, Ser187, Phe225, Phe264, Arg266,
Asp301, Tyr302, Val303, Asn304; and/or at least one additional amino
acid residue is inserted within the region 300-311; provided that other
residues interacting with the above may be changed in order to
15   accommodate the change in one of the above.

Modifications of this kind will permit the expansion of
penicillin V or penicillin G to the corresponding cephalosporins. To achieve
this it is desirable to increase the kcat/Km for the mutant as compared to
the wild type DAOCS. Kinetic results indicate that apparent kcat values for
20   penicillin N and penicillin G are similar but that Km is much higher for
penicillin G. Thus based on these analysis, a decrease in the binding
constant of DAOCS for penicillin G should make it possible to increase
kcat/Km for penicillin G.

The side chain binding pocket of DAOCS is made of residues
25   from different parts of the peptide chain, so it is likely that more than one
residue will have to be altered to make a better penicillin G/V expander.
Nevertheless some residues are more important than others. Examination
of the interactions between the last few C-terminal residues (Thr-308 to
Ala-311) of one DAOCS molecule and the active site of another in the
30   crystal structure, suggests a binding mode for the penicillin nucleus which

is shown in Figure 2 of the accompanying drawings. The penam C-3 carboxylate group probably occupies an analogous position to that of Ala-311 from a symmetry related molecule in the active site, forming electrostatic interactions with Arg-162 and Arg-160. The side chain of

5   Arg-160 may also form a hydrogen bonding interaction with the β-lactam carbonyl.

It needs to be borne in mind that protein specificity is generally controlled by more than one amino acid. To alter the specificity of a protein in a major way is likely to require more than one of the

10   mutational changes suggested below, although each of the mutations will contribute. With this in mind, preferred residues to modify for the expansion of a penicillin are as follows:

a)   Arg-266. This residue binds with the α-aminoadipate side chain of the natural substrate and should be changed to a residue of more

15   hydrophobic character, e.g. Phe, Ala, Val, Leu, Ile.

b)   Thr-72. This should be changed to a hydrophobic residue e.g. Val, Leu, Ile, Phe, Ala, to help bind the hydrophobic side chain of penicillin G. It should be effective in combination with other mutants.

c)   Arg-74 may be usefully changed to a neutral or hydrophobic

20   residue (Phe, Tyr, Val, Leu, Ile, Ala). Modification of Arg-75 may be necessary in addition because it forms a hydrogen-bonding network with Arg-74.

d)   Glu-156. This residue binds with the α-aminoadipate side chain. It should be changed to one of Ala, Val, Leu, Ile, Phe, Tyr, Trp, Asn, Gln, Ser.

25   e)   The side chains of Leu-158, Asn-301 and Tyr-302 form part of the binding pocket for the penicillin side chain and can be usefully modified to more hydrophobic character.

f)   Asn-304. This residue binds the amide linking the side chain to the penam nucleus. Modification is effected to expand penicillins with

30   shortened or no side chains (e.g. to Asp or Glu for 6-Apa).

- 8 -

Note that other changes may be used to construct part or all of a side chain binding pocket via hydrogen bonding or other interactions.

The insertion or deletion of residues into the DAOCS sequence may also be of use in constructing a hydrophobic binding pocket
5   for the penicillin side chain. Insertion of hydrophobic residues into the C-terminal region (residue 300-311 and in particular 301-303) may assist in the construction of a hydrophobic binding pocket for penicillin side chains.

In another aspect the invention provides an enzyme having significant (as herein defined) sequence similarity to DAOCS wherein the
10   penicillin/cephalosporin binding site of penicillin N or DAOC is modified and at at least one of the following amino acid residues is changed or deleted: Ile88, Arg160, Arg162, Phe164, Met180, Thr190, Ile192, Phe225, Pro241, Val245, Val262, Phe264, Asn304, Ile305, Arg306, Arg307; and/or at least one additional amino acid residue is inserted within the region 300-311;
15   provided that other residues interacting with the above may be changed in order to accommodate the change in one of the above.

Further discussion of this aspect may be found in Nature Volume 394, pages 805-809 published on 20 August 1998 and incorporated by reference herein.
20   Another aspect of the invention refers to the use of the structure of DAOCS in order to modify its active site (or that of a structurally related 2-oxoglutarate dependent dioxygenase) in order that the modified enzyme accepts non beta lactam substrates in order to produce oxidised compounds of value. Oxidised amino acids (e.g.
25   4-hydroxyprolines, hydroxylysines, hydroxyaspartic acids and others) are useful as synthetic intermediates in the production of valuable materials. Using the structure of DAOCS specific residues can be targeted for modification in order that the modified enzyme can be used to produce oxidised amino acids or peptides. The process may include modification of
30   the following residues:

Arg74, Glu156, Leu158, Arg160, Arg162, Leu186, Ser187,
Phe225, Phe264, Arg266, Asp301, Tyr302, Val303, Asn304, Ile88,
Arg162, Phe164, Met180, Thr190, Ile192, Pro241, Val245, Val262, Ile305,
Arg306, Arg307.

5   Another aspect of the invention refers to the use of the
DAOCS structure for the design of selective inhibitors of 2-oxoglutarate
dependent dioxygenases. The 2-oxoglutarate dependent dioxygenase
prolyl 4-hydroxylase has been the target of inhibition in order to provide a
therapeutic treatment for fibrotic diseases (e.g. liver cirrhosis, arthritis).
10   However, no inhibitors are in clinical use, probably because it is difficult to
achieve selective inhibition of the target enzyme for inhibition over other
enzymes (including 2-oxoglutarate dependent enzymes). The structure of
DAOCS provides a template for the design of inhibitors of 2-oxoglutarate
dependent dioxygenases.

15   Set out below are two high resolution crystal structures for
DAOCS from S. clavuligerus: the structure of the iron-free apoenzyme
(Structure A) and the structure of the complex with Fe(II) and
2-oxoglutarate (Structure B). The results imply a mechanism by which the
enzyme-Fe(II) complex reacts with 2-oxoglutarate and dioxygen to give the
20   reactive ferryl species, a process common to many non-haem oxygenases.
Other notable 2-oxoacid-dependent ferrous enzymes are prolyl
hydroxylase, involved in collagen biosynthesis, gibberellin 3β-hydroxylase,
a mutation of which influences stem length in plants, and clavaminic acid
synthase, involved in the biosynthesis of the β-lactamase inhibitor,
25   clavulanic acid. Within the family of 2-oxoacid-dependent enzymes,
DAOCS belongs to a sub-family, the members of which show sequence
similarity with IPNS and 1-aminocyclopropane-1-carboxylate oxidase (the
ethylene forming enzyme), enzymes that do not use a 2-oxoacid in
catalysis.
30   The iron-free form of DAOCS crystallises in space group R3

- 10 -

as a crystallographic trimer. The main chain of the protein folds into a conserved jelly roll core with flanking helices.

Co-ordinates and structure factors have been deposited with the Protein Data Bank (entries 1rxg, and r1rxgsf for the
5   Fe(II)-2-oxoglutarate complex).

LEGENDS TO FIGURES.

Figure 1: the biosynthetic pathway to the penicillins and cephalosporins.
10   Figure 2 is a view of the active site of DAOCS showing 2-oxoglutarate binding to the iron and proposed penicillin N binding. Interactions with the side chains of certain amino acid residues are indicated by arrows.

Structure A is a three-dimensional structure of DAOCS.
15   Structure B is a high resolution crystal structure for prokaryotic DAOCS from S. clavuligerus as a complex with Fe(II) and 2-oxoglutarate.

The peptide sequence of DAOCS (with the numbering used herein) is set out below:

```
         Met Asp Thr Thr Val Pro Thr Phe Ser Leu          10
         Ala Glu Leu Gln Gln Gly Leu His Gln Asp          20
         Glu Phe Arg Arg Cys Leu Arg Asp Lys Gly          30
         Leu Phe Tyr Leu Thr Asp Cys Gly Leu Thr          40
    5    Asp Thr Glu Leu Lys Ser Ala Lys Asp Leu          50
         Val Ile Asp Phe Phe Glu His Gly Ser Glu          60
         Ala Glu Lys Arg Ala Val Thr Ser Pro Val          70
         Pro Thr Met Arg Arg Gly Phe Thr Gly Leu          80
         Glu Ser Glu Ser Thr Ala Gln Ile Thr Asn          90
   10    Thr Gly Ser Tyr Ser Asp Tyr Ser Met Cys         100
         Tyr Ser Met Gly Thr Ala Asp Asn Leu Phe         110
         Pro Ser Gly Asp Phe Gly Arg Ile Trp Thr         120
         Gln Tyr Phe Asp Arg Gln Tyr Thr Ala Ser         130
         Arg Ala Val Ala Arg Glu Val Leu Arg Ala         140
   15    Thr Gly Thr Glu Pro Asp Gly Gly Val Glu         150
         Ala Phe Leu Asp Cys Glu Pro Leu Leu Arg         160
         Phe Arg Tyr Phe Pro Gln Val Pro Glu His         170
         Arg Ser Ala Glu Glu Gln Pro Leu Arg Met         180
         Ala Pro His Tyr Asp Leu Ser Met Val Thr         190
   20    Leu Ile Gln Gln Thr Pro Cys Ala Asn Gly         200
         Phe Val Ser Leu Gln Ala Glu Val Gly Gly         210
         Ala Phe Thr Asp Leu Pro Tyr Arg Pro Asp         220
         Ala Val Leu Val Phe Cys Gly Ala Ile Ala         230
         Thr Leu Val Thr Gly Gly Gln Val Lys Ala         240
   25    Pro Arg His His Val Ala Ala Pro Arg Arg         250
         Asp Gln Ile Ala Gly Ser Ser Arg Thr Ser         260
         Ser Val Phe Phe Leu Arg Pro Asn Ala Asp         270
         Phe Thr Phe Ser Val Pro Leu Ala Arg Glu         280
         Cys Gly Phe Asp Val Ser Leu Asp Gly Glu         290
   30    Thr Ala Thr Phe Gln Asp Trp Ile Gly Gly         300
         Asn Tyr Val Asn Ile Arg Arg Thr Ser Lys         310
         Ala                                             311
```

STRUCTURE A

CRYST1	106.400	106.400	71.100	90.00	90.00	120.00
SCALE1		0.009398	0.005426	0.000000	0.000000
SCALE2		0.000000	0.010852	0.000000	0.000000
SCALE3		0.000000	0.000000	0.014065	0.000000

```
ATOM      1   N    AMET 1    31.434  10.641  59.873 0.542 44.31
ANISOU    1   N    AMET 1    8315    2319    6203   -614  -3454  -791
ATOM      2   CA   AMET 1    30.985  11.769  59.065 0.542 39.90
ANISOU    2   CA   AMET 1    9037    3006    3117   -786  -1026  -296
ATOM      3   C    AMET 1    30.472  12.900  59.956 0.542 28.97
ANISOU    3   C    AMET 1    4807    3113    3086   -421  -2189  -119
ATOM      4   O    AMET 1    29.961  12.670  61.055 0.542 28.12
ANISOU    4   O    AMET 1    3925    2381    4377   -402  -1097   7 4
ATOM      5   CB   AMET 1    29.970  11.328  58.023 0.542 34.85
ANISOU    5   CB   AMET 1    7877    3692    1672    30    -91  -373
ATOM      6   CG   AMET 1    28.626  12.015  57.903 0.542 38.19
ANISOU    6   CG   AMET 1    7367    4873    2270    133   912  -1765
ATOM      7   SD   AMET 1    27.564  11.232  56.654 0.542 47.19
ANISOU    7   SD   AMET 1    6146    7957    3827   -2344 1050 -1326
ATOM      8   CE   AMET 1    28.129  11.973  55.135 0.542 27.10
ANISOU    8   CE   AMET 1    5030    2111    3155   2345  -1467  - 9
ATOM      9   N    AASP 2    30.592  14.105  59.425 0.268 30.20
ANISOU    9   N    AASP 2    4674    3022    3777   -1210 -782  -383
ATOM     10   CA   AASP 2    29.993  15.322  59.963 0.268 34.22
ANISOU   10   CA   AASP 2    5567    2803    4633   -1106 -964   -525
ATOM     11   C    AASP 2    28.494  15.268  59.655 0.268 33.34
ANISOU   11   C    AASP 2    5665    1997    5006   -314  -1457  877
ATOM     12   O    AASP 2    28.099  15.650  58.551 0.268 44.76
ANISOU   12   O    AASP 2    6859    5248    4901   -1023 -1582 1631
ATOM     13   CB   AASP 2    30.629  16.528  59.281 0.268 25.98
ANISOU   13   CB   AASP 2    4424    3085    2361    322   -1794  582
ATOM     14   CG   AASP 2    29.978  17.862  59.553 0.268 38.05
ANISOU   14   CG   AASP 2    6456    2611    5389   -501  -608  -1114
ATOM     15   OD1  AASP 2    28.995  17.937  60.318 0.268 42.35
ANISOU   15   OD1  AASP 2    6406    504  9179    873    920 1991
ATOM     16   OD2  AASP 2    30.449  18.885  58.997 0.268 28.59
ANISOU   16   OD2  AASP 2    1619    2901    6341    790   -1022  -253
ATOM     17   N    BMET 1    32.709  12.640  58.544 0.458 29.49
ANISOU   17   N    BMET 1    4552    2218    4435   -105  1580  477
ATOM     18   CA   BMET 1    31.874  13.050  57.425 0.458 40.62
ANISOU   18   CA   BMET 1    4228    4809    6395    580   210  1 0 3
ATOM     19   C    BMET 1    30.884  14.113  57.894 0.458 38.21
ANISOU   19   C    BMET 1    5082    3637    5797    282   -909  -915
ATOM     20   O    BMET 1    30.075  14.599  57.110 0.458 44.81
ANISOU   20   O    BMET 1    8292    3208    5525   2071  -656  - 12
ATOM     21   CB   BMET 1    31.131  11.857  56.829 0.458 33.14
ANISOU   21   CB   BMET 1    4866    2613    5114   2013  -122 818
ATOM     22   CG   BMET 1    29.625  11.840  56.968 0.458 40.28
ANISOU   22   CG   BMET 1    4795    5740    4768    230   -751  5 3
ATOM     23   SD   BMET 1    28.761  11.495  55.422 0.458 34.23
ANISOU   23   SD   BMET 1    5619    3819    3566   2050  -215 2 0
ATOM     24   CE   BMET 1    29.953  12.079  54.222 0.458 54.24
ANISOU   24   CE   BMET 1    10672   4519    5420   1149  4083 -2 4 6 3
ATOM     25   N    BASP 2    30.914  14.381  59.194 0.732 37.72
ANISOU   25   N    BASP 2    4433    3914    5984   -1323 -1208  -1385
ATOM     26   CA   BASP 2    29.979  15.308  59.811 0.732 35.78
ANISOU   26   CA   BASP 2    5412    3387    4794   -1064 -1050  -795
ATOM     27   C    BASP 2    28.536  14.886  59.567 0.732 29.66
ANISOU   27   C    BASP 2    4876    1624    4771    27 -1561 1218
ATOM     28   O    BASP 2    28.181  14.602  58.414 0.732 34.65
ANISOU   28   O    BASP 2    4375    3689    5100    65 -1485  247
ATOM     29   CB   BASP 2    30.195  16.696  59.181 0.732 37.39
ANISOU   29   CB   BASP 2    6632    3351    4222   -1850 869   -1518
ATOM     30   CG   BASP 2    29.562  17.730  60.104 0.732 30.38
ANISOU   30   CG   BASP 2    3243    3791    4510   -500  -606  -1191
ATOM     31   OD1  BASP 2    28.866  17.247  61.030 0.732 48.88
```

- 14 -

ANISOU	31	OD1	BASP	2	6276	4203	8095	-1203	3147	-1901	
ATOM	32	OD2	BASP	2	29.760	18.945	59.875	0.732	34.85		
ANISOU	32	OD2	BASP	2	2852	3708	6680	-491	444	-1450	
ATOM	33	N	THR	3	27.717	14.789	60.606	1.000	35.58		
ANISOU	33	N	THR	3	4586	4123	4811	601	-1628	1516	
ATOM	34	CA	THR	3	26.303	14.433	60.495	1.000	40.48		
ANISOU	34	CA	THR	3	4650	4555	6175	371	-911	-385	
ATOM	35	C	THR	3	25.382	15.647	60.611	1.000	39.82		
ANISOU	35	C	THR	3	4376	4155	6598	320	-3864	-586	
ATOM	36	O	THR	3	24.150	15.556	60.751	1.000	33.55		
ANISOU	36	O	THR	3	4668	3107	4972	357	-2748	-588	
ATOM	37	CB	THR	3	25.905	13.450	61.613	1.000	39.95		
ANISOU	37	CB	THR	3	3787	4004	7387	160	-1209	62	
ATOM	38	OG1	THR	3	26.591	13.851	62.817	1.000	61.83		
ANISOU	38	OG1	THR	3	10134	5882	7476	-4164	-3020	2051	
ATOM	39	CG2	THR	3	26.399	12.052	61.278	1.000	59.32		
ANISOU	39	CG2	THR	3	4613	3971	13955	1114	-3135	-198	
ATOM	40	N	THR	4	26.036	16.780	60.456	1.000	32.55		
ANISOU	40	N	THR	4	4306	4611	3450	377	-2166	-217	
ATOM	41	CA	THR	4	25.439	18.092	60.393	1.000	31.22		
ANISOU	41	CA	THR	4	4275	4229	3358	-81	-1179	95	
ATOM	42	C	THR	4	24.672	18.272	59.090	1.000	30.06		
ANISOU	42	C	THR	4	4876	3341	3207	773	-1156	-204	
ATOM	43	O	THR	4	25.195	17.935	58.017	1.000	31.64		
ANISOU	43	O	THR	4	4877	3780	3363	1935	-1255	-52	
ATOM	44	CB	THR	4	26.510	19.208	60.407	1.000	32.31		
ANISOU	44	CB	THR	4	2320	4762	5194	475	-547	593	
ATOM	45	OG1	THR	4	27.324	19.091	61.578	1.000	32.36		
ANISOU	45	OG1	THR	4	3705	3955	4635	-79	-797	-389	
ATOM	46	CG2	THR	4	25.852	20.582	60.458	1.000	27.22		
ANISOU	46	CG2	THR	4	3728	4174	2443	71	304	-151	
ATOM	47	N	VAL	5	23.464	18.796	59.211	1.000	21.69		
ANISOU	47	N	VAL	5	4041	1985	2215	-543	-657	158	
ATOM	48	CA	VAL	5	22.690	19.140	58.024	1.000	20.42		
ANISOU	48	CA	VAL	5	3675	1964	2120	-622	-517	103	
ATOM	49	C	VAL	5	23.199	20.489	57.499	1.000	17.01		
ANISOU	49	C	VAL	5	2263	1803	2396	-279	-622	89	
ATOM	50	O	VAL	5	23.156	21.449	58.252	1.000	21.10		
ANISOU	50	O	VAL	5	3662	1885	2472	-389	-656	16	
ATOM	51	CB	VAL	5	21.204	19.216	58.402	1.000	24.22		
ANISOU	51	CB	VAL	5	3551	2155	3495	-1045	-396	783	
ATOM	52	CG1	VAL	5	20.434	19.700	57.166	1.000	20.14		
ANISOU	52	CG1	VAL	5	3202	1779	2672	-453	10	-226	
ATOM	53	CG2	VAL	5	20.701	17.867	58.860	1.000	28.58		
ANISOU	53	CG2	VAL	5	5258	2086	3516	-1226	431	510	
ATOM	54	N	PRO	6	23.750	20.542	56.300	1.000	16.95		
ANISOU	54	N	PRO	6	2378	1629	2434	29	-594	301	
ATOM	55	CA	PRO	6	24.354	21.793	55.857	1.000	16.90		
ANISOU	55	CA	PRO	6	1645	1775	3000	6	-445	303	
ATOM	56	C	PRO	6	23.298	22.800	55.383	1.000	15.61		
ANISOU	56	C	PRO	6	1477	1766	2687	-192	-437	545	
ATOM	57	O	PRO	6	22.133	22.432	55.201	1.000	15.75		
ANISOU	57	O	PRO	6	1578	1761	2647	-260	-579	55	
ATOM	58	CB	PRO	6	25.216	21.375	54.682	1.000	19.85		
ANISOU	58	CB	PRO	6	2320	1752	3468	50	70	182	
ATOM	59	CG	PRO	6	24.632	20.095	54.187	1.000	24.76		
ANISOU	59	CG	PRO	6	3550	2953	2904	-1186	300	-286	
ATOM	60	CD	PRO	6	23.926	19.428	55.357	1.000	17.91		
ANISOU	60	CD	PRO	6	1960	1962	2882	-168	-138	-44	
ATOM	61	N	THR	7	23.723	24.031	55.156	1.000	14.38		
ANISOU	61	N	THR	7	1518	1567	2378	-158	-616	100	

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ATOM    62   CA  THR   7   22.907  25.103  54.610 1.000 14.09
ANISOU  62   CA  THR   7   1625    1554    2174   -255  -581 2 2 8
ATOM    63   C   THR   7   23.605  25.684  53.374 1.000 14.74
ANISOU  63   C   THR   7   1683    1849    2067   -193  -468 1 2 1
ATOM    64   O   THR   7   24.828  25.894  53.423 1.000 15.95
ANISOU  64   O   THR   7   1752    2137    2171   -378  -457 1 8 5
ATOM    65   CB  THR   7   22.795  26.248  55.637 1.000 15.25
ANISOU  65   CB  THR   7   1548    1846    2401    56  -124  5 2
ATOM    66   OG1 THR   7   22.208  25.717  56.829 1.000 16.91
ANISOU  66   OG1 THR   7   1818    2149    2458   -402  -183 4 7
ATOM    67   CG2 THR   7   21.952  27.387  55.040 1.000 16.09
ANISOU  67   CG2 THR   7   1651    1613    2848   -138  -263 - 2 5
ATOM    68   N   PHE   8   22.830  25.892  52.325 1.000 15.06
ANISOU  68   N   PHE   8   1966    1618    2137   -411  -558 2 3 0
ATOM    69   CA  PHE   8   23.317  26.545  51.136 1.000 14.76
ANISOU  69   CA  PHE   8   1857    1558    2192   -213  -411 2 8 1
ATOM    70   C   PHE   8   22.421  27.728  50.810 1.000 14.94
ANISOU  70   C   PHE   8   1907    1421    2347   -275  -357 1 8 1
ATOM    71   O   PHE   8   21.198  27.678  50.995 1.000 16.40
ANISOU  71   O   PHE   8   1782    1642    2808   -197  -550 3 4
ATOM    72   CB  PHE   8   23.242  25.562  49.948 1.000 16.49
ANISOU  72   CB  PHE   8   2123    1854    2287    49  -371  - 1
ATOM    73   CG  PHE   8   24.225  24.432  50.027 1.000 14.92
ANISOU  73   CG  PHE   8   1710    1824    2135   -197  -365 1 6 3
ATOM    74   CD1 PHE   8   23.822  23.227  50.600 1.000 16.78
ANISOU  74   CD1 PHE   8   1808    1726    2842   -300  -358 1 8 4
ATOM    75   CD2 PHE   8   25.539  24.558  49.602 1.000 16.67
ANISOU  75   CD2 PHE   8   1705    2130    2500   -310  -361 3 2 1
ATOM    76   CE1 PHE   8   24.702  22.183  50.742 1.000 16.74
ANISOU  76   CE1 PHE   8   2035    1966    2359    -4  -99 2 9 5
ATOM    77   CE2 PHE   8   26.420  23.525  49.773 1.000 19.18
ANISOU  77   CE2 PHE   8   1398    2153    3736   -408  -631 1 8 7
ATOM    78   CZ  PHE   8   26.026  22.336  50.351 1.000 17.90
ANISOU  78   CZ  PHE   8   1849    2003    2948   -119  -376 2 0
ATOM    79   N   SER   9   23.023  28.776  50.314 1.000 14.82
ANISOU  79   N   SER   9   2134    1488    2008   -351  -528 3 1 0
ATOM    80   CA  SER   9   22.338  29.902  49.715 1.000 15.12
ANISOU  80   CA  SER   9   2037    1259    2449   -357  -571 1 3 4
ATOM    81   C   SER   9   21.977  29.607  48.270 1.000 16.19
ANISOU  81   C   SER   9   2138    1791    2224   -374  -535 5 4 7
ATOM    82   O   SER   9   22.877  29.312  47.473 1.000 17.04
ANISOU  82   O   SER   9   2191    1892    2393   -423  -544 2 3 2
ATOM    83   CB  SER   9   23.306  31.113  49.696 1.000 18.74
ANISOU  83   CB  SER   9   2891    1712    2519   -1012 -478 7 1 7
ATOM    84   OG  SER   9   22.738  32.131  48.853 1.000 20.82
ANISOU  84   OG  SER   9   2866    1569    3477   -662  -854 6 0 7
ATOM    85   N   LEU  10   20.697  29.674  47.924 1.000 16.46
ANISOU  85   N   LEU  10   2215    1495    2542   -228  -740 - 4 8
ATOM    86   CA  LEU  10   20.345  29.401  46.529 1.000 17.55
ANISOU  86   CA  LEU  10   2263    1856    2551   -582  -694 3 6
ATOM    87   C   LEU  10   21.079  30.373  45.591 1.000 18.84
ANISOU  87   C   LEU  10   2506    1870    2784   -596  -830 3 5 7
ATOM    88   O   LEU  10   21.573  30.025  44.520 1.000 20.19
ANISOU  88   O   LEU  10   2705    2263    2704   -524  -663 5 0 8
ATOM    89   CB  LEU  10   18.844  29.559  46.327 1.000 18.87
ANISOU  89   CB  LEU  10   2302    2516    2354   -288  -715 2 8 0
ATOM    90   CG  LEU  10   18.355  29.333  44.895 1.000 18.28
ANISOU  90   CG  LEU  10   2182    2172    2591   -668  -677 - 3 0 1
ATOM    91   CD1 LEU  10   18.708  27.955  44.397 1.000 22.45
ANISOU  91   CD1 LEU  10   3418    2024    3089   -308  -537 1 7
ATOM    92   CD2 LEU  10   16.852  29.603  44.869 1.000 21.93
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ANISOU  92    CD2 LEU   10   2250    2658    3424   -504  -1139   7 5
ATOM    93    N   ALA   11   21.154  31.638  46.037 1.000 20.05
ANISOU  93    N   ALA   11   2862    1780    2977   -595  -1279   4 7 2
ATOM    94    CA  ALA   11   21.810  32.647  45.202 1.000 24.24
ANISOU  94    CA  ALA   11   3160    1670    4380   -455  -979   8 9 1
ATOM    95    C   ALA   11   23.285  32.309  44.946 1.000 21.06
ANISOU  95    C   ALA   11   3128    1937    2937   -644  -1016  4 3 1
ATOM    96    O   ALA   11   23.819  32.447  43.829 1.000 26.29
ANISOU  96    O   ALA   11   3569    3261    3158   -1628 -923  1 1 3 7
ATOM    97    CB  ALA   11   21.752  33.989  45.953 1.000 24.29
ANISOU  97    CB  ALA   11   3740    1692    3797   -461  -216  9 9 6
ATOM    98    N   GLU   12   23.953  31.844  46.005 1.000 20.65
ANISOU  98    N   GLU   12   2829    1975    3044   -828  -930  6 7 4
ATOM    99    CA  GLU   12   25.354  31.463  45.862 1.000 21.19
ANISOU  99    CA  GLU   12   3036    2400    2615   -506  -715  5 9 8
ATOM    100   C   GLU   12   25.483  30.277  44.920 1.000 21.56
ANISOU  100   C   GLU   12   3894    2179    2117   -702  -206  9 8 8
ATOM    101   O   GLU   12   26.375  30.215  44.069 1.000 21.98
ANISOU  101   O   GLU   12   3463    2917    1971   -1144 -488  6 1 8
ATOM    102   CB  GLU   12   26.032  31.170  47.204 1.000 20.27
ANISOU  102   CB  GLU   12   2874    2192    2636   -221  -624  5 0 1
ATOM    103   CG  GLU   12   26.156  32.451  48.032 1.000 20.54
ANISOU  103   CG  GLU   12   2889    2316    2598   -344  -516  4 0 6
ATOM    104   CD  GLU   12   26.787  32.279  49.389 1.000 21.86
ANISOU  104   CD  GLU   12   3146    2542    2619   -1297 -612  7 9 9
ATOM    105   OE1 GLU   12   27.068  31.149  49.803 1.000 24.98
ANISOU  105   OE1 GLU   12   3642    2681    3169   -1348 -1088  1 1 3 4
ATOM    106   OE2 GLU   12   26.819  33.305  50.092 1.000 33.52
ANISOU  106   OE2 GLU   12   5881    2966    3888   -1119 -2251  4 6
ATOM    107   N   LEU   13   24.600  29.295  45.060 1.000 18.91
ANISOU  107   N   LEU   13   2567    2345    2275   -351  -390  3 8 2
ATOM    108   CA  LEU   13   24.645  28.117  44.174 1.000 18.61
ANISOU  108   CA  LEU   13   2575    2347    2149   -209  270   4 0 6
ATOM    109   C   LEU   13   24.432  28.566  42.738 1.000 21.40
ANISOU  109   C   LEU   13   3558    2367    2206   -709  -41   5 2 6
ATOM    110   O   LEU   13   25.102  28.095  41.824 1.000 23.75
ANISOU  110   O   LEU   13   3827    3216    1981   -823  -117  1 9 0
ATOM    111   CB  LEU   13   23.541  27.137  44.562 1.000 18.97
ANISOU  111   CB  LEU   13   2982    2243    1984   -462  -145  4 4 0
ATOM    112   CG  LEU   13   23.773  26.344  45.860 1.000 18.57
ANISOU  112   CG  LEU   13   2313    2322    2422   -467  -362  7 4 5
ATOM    113   CD1 LEU   13   22.526  25.480  46.070 1.000 20.74
ANISOU  113   CD1 LEU   13   2769    2266    2845   -789  -142  5 9 4
ATOM    114   CD2 LEU   13   25.023  25.473  45.858 1.000 19.80
ANISOU  114   CD2 LEU   13   2709    2229    2585   -244  -509  - 1 0 7
ATOM    115   N   GLN   14   23.544  29.508  42.478 1.000 22.03
ANISOU  115   N   GLN   14   3596    2139    2635   -960  -903  3 7 9
ATOM    116   CA  GLN   14   23.284  29.978  41.104 1.000 23.79
ANISOU  116   CA  GLN   14   3010    3335    2694   -992  -816  6 4 8
ATOM    117   C   GLN   14   24.481  30.712  40.509 1.000 25.44
ANISOU  117   C   GLN   14   3360    3427    2881   -1070 -382  4 8 7
ATOM    118   O   GLN   14   24.655  30.829  39.288 1.000 30.04
ANISOU  118   O   GLN   14   3836    4657    2922   -1208 -427  8 9 8
ATOM    119   CB  GLN   14   22.064  30.906  41.131 1.000 26.28
ANISOU  119   CB  GLN   14   3133    3630    3222   -760  -863  9 3 8
ATOM    120   CG  GLN   14   20.772  30.111  41.355 1.000 23.26
ANISOU  120   CG  GLN   14   3106    2319    3413   -299  -577  5 1 4
ATOM    121   CD  GLN   14   19.586  31.020  41.631 1.000 23.69
ANISOU  121   CD  GLN   14   3384    2462    3155   -317  -393  - 1 9 6
ATOM    122   OE1 GLN   14   19.734  32.104  42.160 1.000 28.34
ANISOU  122   OE1 GLN   14   4973    2619    3175   -183  -732  - 4 0 8
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ATOM    123  NE2 GLN  14   18.398  30.513  41.349 1.000 23.60
ANISOU  123  NE2 GLN  14   3058    2969    2941   -383  54  245
ATOM    124  N   GLN  15   25.309  31.243  41.395 1.000 25.00
ANISOU  124  N   GLN  15   3078    3281    3140  -1159 -394 5 75
ATOM    125  CA  GLN  15   26.530  31.936  40.945 1.000 24.05
ANISOU  125  CA  GLN  15   2947    3560    2631   -866  -98  655
ATOM    126  C   GLN  15   27.650  30.920  40.707 1.000 26.06
ANISOU  126  C   GLN  15   3810    3951    2139   -345  406  668
ATOM    127  O   GLN  15   28.756  31.284  40.302 1.000 35.85
ANISOU  127  O   GLN  15   4294    4851    4476   102  1871 1192
ATOM    128  CB  GLN  15   27.018  32.918  42.009 1.000 25.90
ANISOU  128  CB  GLN  15   3055    3037    3748  -1092 -109 364
ATOM    129  CG  GLN  15   26.103  34.092  42.219 1.000 31.24
ANISOU  129  CG  GLN  15   4562    2577    4731   -806  962  1054
ATOM    130  CD  GLN  15   26.503  35.022  43.348 1.000 59.75
ANISOU  130  CD  GLN  15   9927    2475   10301  -1855  -14 -1904
ATOM    131  OE1 GLN  15   27.634  35.031  43.840 1.000 81.81
ANISOU  131  OE1 GLN  15   15059   3931   12094  -944 -6272 -1803
ATOM    132  NE2 GLN  15   25.539  35.841  43.767 1.000 91.46
ANISOU  132  NE2 GLN  15   14070   4846   15833  -923  3672 -4850
ATOM    133  N   GLY  16   27.379  29.643  40.969 1.000 29.90
ANISOU  133  N   GLY  16   4634    3820    2907   -239  22  787
ATOM    134  CA  GLY  16   28.410  28.649  40.699 1.000 28.76
ANISOU  134  CA  GLY  16   4466    3629    2833   -709  461  250
ATOM    135  C   GLY  16   29.339  28.473  41.878 1.000 27.60
ANISOU  135  C   GLY  16   3816    3779    2891   -616  914  1485
ATOM    136  O   GLY  16   30.398  27.867  41.725 1.000 31.47
ANISOU  136  O   GLY  16   3386    4758    3814   -899  1243 1023
ATOM    137  N   LEU  17   28.960  28.898  43.083 1.000 26.01
ANISOU  137  N   LEU  17   3295    3636    2950   -721  162  743
ATOM    138  CA  LEU  17   29.776  28.666  44.257 1.000 23.96
ANISOU  138  CA  LEU  17   2700    3032    3372   -601  100  673
ATOM    139  C   LEU  17   29.462  27.338  44.932 1.000 20.31
ANISOU  139  C   LEU  17   2222    2763    2733   -252  611  261
ATOM    140  O   LEU  17   28.389  26.780  44.789 1.000 23.13
ANISOU  140  O   LEU  17   2347    3134    3308   -443  263  859
ATOM    141  CB  LEU  17   29.645  29.806  45.286 1.000 25.94
ANISOU  141  CB  LEU  17   2886    2933    4035  -1318 -405 254
ATOM    142  CG  LEU  17   29.962  31.209  44.716 1.000 31.57
ANISOU  142  CG  LEU  17   3741    2948    5308   -523  1150 722
ATOM    143  CD1 LEU  17   29.550  32.358  45.615 1.000 32.04
ANISOU  143  CD1 LEU  17   5221    2887    4066  -1269 278  508
ATOM    144  CD2 LEU  17   31.458  31.278  44.416 1.000 38.11
ANISOU  144  CD2 LEU  17   3828    5491    5160  -2315 954  232
ATOM    145  N   HIS  18   30.441  26.822  45.681 1.000 22.49
ANISOU  145  N   HIS  18   2600    3067    2877   -662  42  449
ATOM    146  CA  HIS  18   30.289  25.644  46.537 1.000 21.54
ANISOU  146  CA  HIS  18   2378    2809    2996   -432  201  313
ATOM    147  C   HIS  18   29.908  24.376  45.790 1.000 22.76
ANISOU  147  C   HIS  18   2256    3245    3148  -1009 282  114
ATOM    148  O   HIS  18   29.147  23.565  46.331 1.000 22.60
ANISOU  148  O   HIS  18   2008    3064    3516   -629  -166 884
ATOM    149  CB  HIS  18   29.224  25.872  47.618 1.000 22.81
ANISOU  149  CB  HIS  18   2514    2879    3272   -526  450  4 21
ATOM    150  CG  HIS  18   29.320  27.248  48.217 1.000 21.70
ANISOU  150  CG  HIS  18   2797    3038    2411   -149  39  503
ATOM    151  ND1 HIS  18   30.438  27.773  48.807 1.000 25.01
ANISOU  151  ND1 HIS  18   3714    3505    2284   -207  -629 149
ATOM    152  CD2 HIS  18   28.370  28.216  48.269 1.000 24.95
ANISOU  152  CD2 HIS  18   3244    3278    2957   87  544 275
ATOM    153  CE1 HIS  18   30.197  28.982  49.223 1.000 29.26
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- 18 -

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ANISOU  153  CE1 HIS  18   4603    3396    3118    -388  -335  2 7
ATOM    154  NE2 HIS  18  28.937  29.271  48.919 1.000 27.24
ANISOU  154  NE2 HIS  18   4582    3137    2632     2    224 3 6 5
ATOM    155  N   GLN  19  30.269  24.270  44.521 1.000 22.74
ANISOU  155  N   GLN  19   2724    3094    2822    -511  -123 4 2 3
ATOM    156  CA  GLN  19  29.806  23.113  43.730 1.000 23.85
ANISOU  156  CA  GLN  19   3129    2668    3263    148   63  8 9
ATOM    157  C   GLN  19  30.271  21.760  44.221 1.000 22.77
ANISOU  157  C   GLN  19   2532    3026    3095    -502  -574 7 7 8
ATOM    158  O   GLN  19  29.480  20.801  44.259 1.000 21.99
ANISOU  158  O   GLN  19   1869    2911    3574    -187   0   5 5 8
ATOM    159  CB  GLN  19  30.227  23.322  42.276 1.000 27.66
ANISOU  159  CB  GLN  19   5043    2519    2947    29  -339  4 5 8
ATOM    160  CG  GLN  19  29.397  24.333  41.523 1.000 26.21
ANISOU  160  CG  GLN  19   3289    3163    3508    299   171  4 3 7
ATOM    161  CD  GLN  19  27.917  24.368  41.862 1.000 32.47
ANISOU  161  CD  GLN  19   3403    4411    4521    -986  535  6 5 4
ATOM    162  OE1 GLN  19  27.154  23.604  41.277 1.000 39.69
ANISOU  162  OE1 GLN  19   3996    4238    6845    -262 -2770 18 2 9
ATOM    163  NE2 GLN  19  27.511  25.212  42.811 1.000 42.55
ANISOU  163  NE2 GLN  19   3803    6153    6212    81  1944  1 1
ATOM    164  N   ASP  20  31.526  21.572  44.631 1.000 22.63
ANISOU  164  N   ASP  20   2073    3400    3123    -414   95  7 0 8
ATOM    165  CA  ASP  20  31.926  20.292  45.225 1.000 23.10
ANISOU  165  CA  ASP  20   1869    3674    3235    83   236  7 0 4
ATOM    166  C   ASP  20  31.190  20.042  46.546 1.000 20.03
ANISOU  166  C   ASP  20   1775    2963    2873    -280 -143  4 9 3
ATOM    167  O   ASP  20  30.772  18.899  46.768 1.000 21.48
ANISOU  167  O   ASP  20   1429    2884    3848    -311  225  2 2 4
ATOM    168  CB  ASP  20  33.414  20.268  45.521 1.000 27.66
ANISOU  168  CB  ASP  20   1835    4546    4130    -16   207  8 8 1
ATOM    169  CG  ASP  20  34.298  20.206  44.291 1.000 39.35
ANISOU  169  CG  ASP  20   2355    6893    5705    -654  1323 -19 1 5
ATOM    170  OD1 ASP  20  33.870  19.914  43.153 1.000 35.78
ANISOU  170  OD1 ASP  20   3152    5452    4992    -741  1508 -7 9 7
ATOM    171  OD2 ASP  20  35.508  20.433  44.467 1.000 45.22
ANISOU  171  OD2 ASP  20   2201    8705    6277    -589  1088 - 8 7
ATOM    172  N   GLU  21  31.046  21.053  47.404 1.000 20.01
ANISOU  172  N   GLU  21   1574    2935    3093    -412 -241  3 6 7
ATOM    173  CA  GLU  21  30.323  20.811  48.665 1.000 18.97
ANISOU  173  CA  GLU  21   1412    2956    2838    -481 -464  1 1 8
ATOM    174  C   GLU  21  28.858  20.448  48.402 1.000 17.84
ANISOU  174  C   GLU  21   1386    2342    3050    -307 -395  2 3 4
ATOM    175  O   GLU  21  28.290  19.602  49.054 1.000 18.46
ANISOU  175  O   GLU  21   1671    2286    3057    -419 -351  1 1 6
ATOM    176  CB  GLU  21  30.415  22.058  49.563 1.000 20.10
ANISOU  176  CB  GLU  21   1646    2821    3170    -514 -499  1 2 7
ATOM    177  CG  GLU  21  31.893  22.322  49.918 1.000 24.11
ANISOU  177  CG  GLU  21   1682    3568    3912    -766 -326 -7 1 1
ATOM    178  CD  GLU  21  32.574  23.380  49.081 1.000 29.70
ANISOU  178  CD  GLU  21   1330    4241    5713    -752 -666 5 2 1
ATOM    179  OE1 GLU  21  32.249  23.594  47.887 1.000 35.14
ANISOU  179  OE1 GLU  21   2623    4054    6677   -1336 -1741 19 7 7
ATOM    180  OE2 GLU  21  33.483  24.007  49.678 1.000 39.39
ANISOU  180  OE2 GLU  21   3681    4425    6860   -2089 -1618 6 4 7
ATOM    181  N   PHE  22  28.231  21.048  47.395 1.000 17.30
ANISOU  181  N   PHE  22   1540    2352    2680    -243 -446 - 7 9
ATOM    182  CA  PHE  22  26.851  20.761  47.071 1.000 17.13
ANISOU  182  CA  PHE  22   1534    2166    2807    -235 -396 3 7 4
ATOM    183  C   PHE  22  26.733  19.329  46.552 1.000 17.41
ANISOU  183  C   PHE  22   1688    2500    2427    -502 -334 10 4
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ATOM    184  O   PHE  22   25.867  18.574  46.995 1.000 15.87
ANISOU  184  O   PHE  22   1570    2118    2343   -249  -361 1 3 1
ATOM    185  CB  PHE  22   26.305  21.840  46.149 1.000 18.00
ANISOU  185  CB  PHE  22   1747    2754    2337    70  -178   4 4 5
ATOM    186  CG  PHE  22   24.802  21.729  45.930 1.000 16.38
ANISOU  186  CG  PHE  22   1763    1748    2714   -90  -326 2 2 3
ATOM    187  CD1 PHE  22   23.934  21.723  47.003 1.000 18.29
ANISOU  187  CD1 PHE  22   1812    2091    3045   -197   -88   5 7 6
ATOM    188  CD2 PHE  22   24.290  21.720  44.641 1.000 18.62
ANISOU  188  CD2 PHE  22   2106    2079    2890   -143  -623 3 9 4
ATOM    189  CE1 PHE  22   22.569  21.727  46.771 1.000 18.90
ANISOU  189  CE1 PHE  22   1826    2086    3271   -198  -133 3 0 2
ATOM    190  CE2 PHE  22   22.911  21.660  44.379 1.000 19.28
ANISOU  190  CE2 PHE  22   2189    2023    3114   -242  -754 - 1 4 4
ATOM    191  CZ  PHE  22   22.059  21.645  45.473 1.000 19.42
ANISOU  191  CZ  PHE  22   2048    1723    3607    90  -483  - 3 7 6
ATOM    192  N   ARG  23   27.580  18.971  45.583 1.000 17.88
ANISOU  192  N   ARG  23   1647    2437    2709   -168  -218 3 1 7
ATOM    193  CA  ARG  23   27.520  17.594  45.079 1.000 19.18
ANISOU  193  CA  ARG  23   1724    2539    3022   -166    36 1 5 8
ATOM    194  C   ARG  23   27.767  16.595  46.211 1.000 19.11
ANISOU  194  C   ARG  23   1279    2461    3518   -173  -113 4 5 5
ATOM    195  O   ARG  23   27.107  15.547  46.229 1.000 18.82
ANISOU  195  O   ARG  23   1614    2156    3381   -33    181  - 1 2 8
ATOM    196  CB  ARG  23   28.605  17.351  44.030 1.000 22.81
ANISOU  196  CB  ARG  23   1934    4099    2633   -34   -105 - 3 5 4
ATOM    197  CG  ARG  23   28.248  17.790  42.617 1.000 24.82
ANISOU  197  CG  ARG  23   2601    4078    2752    191  -122 - 2 0 4
ATOM    198  CD  ARG  23   29.376  17.272  41.685 1.000 29.71
ANISOU  198  CD  ARG  23   2503    5619    3168   -285   908   7 0 4
ATOM    199  NE  ARG  23   30.479  18.206  41.800 1.000 30.96
ANISOU  199  NE  ARG  23   2877    5034    3851   -43    286   2 9 7
ATOM    200  CZ  ARG  23   30.549  19.360  41.148 1.000 29.49
ANISOU  200  CZ  ARG  23   2612    5063    3529   -225   606   1 7 7
ATOM    201  NH1 ARG  23   29.536  19.665  40.328 1.000 29.26
ANISOU  201  NH1 ARG  23   3242    4951    2923   -960   331   5 2 5
ATOM    202  NH2 ARG  23   31.629  20.092  41.345 1.000 32.61
ANISOU  202  NH2 ARG  23   2320    5347    4722   -134   519   1 7 9
ATOM    203  N   ARG  24   28.708  16.851  47.125 1.000 17.80
ANISOU  203  N   ARG  24   1262    2168    3332    183    38 9 8
ATOM    204  CA  ARG  24   28.930  15.899  48.222 1.000 18.85
ANISOU  204  CA  ARG  24   1368    2509    3287    69   -162   1 0 5
ATOM    205  C   ARG  24   27.701  15.811  49.114 1.000 17.51
ANISOU  205  C   ARG  24   1456    2015    3181    132  -177 2 4 3
ATOM    206  O   ARG  24   27.333  14.733  49.544 1.000 17.93
ANISOU  206  O   ARG  24   1851    1965    2997   -16   -402 2 5 3
ATOM    207  CB  ARG  24   30.203  16.321  48.991 1.000 19.88
ANISOU  207  CB  ARG  24   1685    2700    3169   -398  -218 4 4
ATOM    208  CG  ARG  24   31.459  16.053  48.135 1.000 29.07
ANISOU  208  CG  ARG  24   1467    4625    4954    269   203   7 0 9
ATOM    209  CD  ARG  24   32.700  16.206  49.016 1.000 41.84
ANISOU  209  CD  ARG  24   1745    7021    7130   -451  -494 - 9 2 2
ATOM    210  NE  ARG  24   33.690  17.103  48.464 1.000 57.06
ANISOU  210  NE  ARG  24   4362    9316    8003   -3326 -669 -1141
ATOM    211  CZ  ARG  24   34.032  18.327  48.810 1.000 60.67
ANISOU  211  CZ  ARG  24   5961    10369   6723   -4627 -1324  -1586
ATOM    212  NH1 ARG  24   33.430  18.980  49.799 1.000 49.70
ANISOU  212  NH1 ARG  24   7748    6565    4569   -951  -2185 2 2 2 6
ATOM    213  NH2 ARG  24   34.997  18.971  48.159 1.000 54.12
ANISOU  213  NH2 ARG  24   8696    8490    3378   -3780 -2352 1 6 0 7
ATOM    214  N   CYS  25   27.092  16.963  49.370 1.000 15.74
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- 20 -

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ANISOU 214   N   CYS  25   1435   1969   2574   -16   -393 - 3 3
ATOM   215   CA  CYS  25   25.884  16.921  50.223  1.000  16.39
ANISOU 215   CA  CYS  25   1518   1954   2756   -95   -317 - 3 0 0
ATOM   216   C   CYS  25   24.826  16.068  49.547  1.000  15.73
ANISOU 216   C   CYS  25   1629   1699   2648   -114  -432 6 6
ATOM   217   O   CYS  25   24.124  15.262  50.155  1.000  15.89
ANISOU 217   O   CYS  25   1453   1801   2783   -88   -469 25 2
ATOM   218   CB  CYS  25   25.367  18.362  50.424  1.000  15.93
ANISOU 218   CB  CYS  25   1644   1779   2629   -49   -261 - 3 0
ATOM   219   SG  CYS  25   23.700  18.417  51.184  1.000  17.82
ANISOU 219   SG  CYS  25   1742   1825   3202   -122  -33  - 5 5
ATOM   220   N   LEU  26   24.623  16.308  48.250  1.000  15.25
ANISOU 220   N   LEU  26   1449   1843   2504   -54   -263 - 1 4 2
ATOM   221   CA  LEU  26   23.560  15.590  47.534  1.000  15.62
ANISOU 221   CA  LEU  26   1616   1739   2580   -86   -453 4 8
ATOM   222   C   LEU  26   23.763  14.085  47.621  1.000  15.18
ANISOU 222   C   LEU  26   1697   1764   2306   -113  -479 6
ATOM   223   O   LEU  26   22.819  13.345  47.771  1.000  16.96
ANISOU 223   O   LEU  26   1797   1725   2920   -234  -664 - 3 0 0
ATOM   224   CB  LEU  26   23.526  16.068  46.066  1.000  16.02
ANISOU 224   CB  LEU  26   1811   1645   2633   -191  -483 12 2
ATOM   225   CG  LEU  26   23.057  17.510  45.864  1.000  15.69
ANISOU 225   CG  LEU  26   1762   1716   2485   -6  -15 7 9
ATOM   226   CD1 LEU  26   23.252  17.880  44.405  1.000  17.48
ANISOU 226   CD1 LEU  26   1750   2360   2532   -17   -130 46 5
ATOM   227   CD2 LEU  26   21.584  17.680  46.290  1.000  17.11
ANISOU 227   CD2 LEU  26   1655   2188   2660   -29   -75  16 8
ATOM   228   N   ARG  27   25.027  13.648  47.494  1.000  17.26
ANISOU 228   N   ARG  27   1870   1818   2871   155   -326 14 0
ATOM   229   CA  ARG  27   25.295  12.205  47.372  1.000  18.75
ANISOU 229   CA  ARG  27   2108   1845   3170   270   -955 10 2
ATOM   230   C   ARG  27   25.240  11.599  48.744  1.000  17.95
ANISOU 230   C   ARG  27   1667   1801   3351   159   -897 21 9
ATOM   231   O   ARG  27   24.777  10.454  48.913  1.000  20.99
ANISOU 231   O   ARG  27   2158   1793   4026   -43   -360 16 8
ATOM   232   CB  ARG  27   26.641  12.008  46.670  1.000  21.35
ANISOU 232   CB  ARG  27   2815   2034   3264   622   -377 - 1 2 9
ATOM   233   N   ASP  28   25.827  12.293  49.723  1.000  16.71
ANISOU 233   N   ASP  28   1487   2004   2856   178   -328 6 7
ATOM   234   CA  ASP  28   26.034  11.672  51.026  1.000  17.47
ANISOU 234   CA  ASP  28   1613   2095   2931   107   -301 12 7
ATOM   235   C   ASP  28   24.872  11.866  51.990  1.000  17.22
ANISOU 235   C   ASP  28   1414   2264   2863   223   -447 4 7 1
ATOM   236   O   ASP  28   24.816  11.081  52.937  1.000  17.62
ANISOU 236   O   ASP  28   1932   2139   2624   150   -565 3 2 7
ATOM   237   CB  ASP  28   27.306  12.237  51.657  1.000  22.17
ANISOU 237   CB  ASP  28   1581   3894   2948   -272  -467 55 9
ATOM   238   CG  ASP  28   28.590  11.906  50.941  1.000  24.72
ANISOU 238   CG  ASP  28   1596   3323   4472   236   -288 64 8
ATOM   239   OD1 ASP  28   28.572  10.905  50.199  1.000  27.56
ANISOU 239   OD1 ASP  28   2317   3071   5084   808   -284 57 2
ATOM   240   OD2 ASP  28   29.573  12.617  51.251  1.000  32.08
ANISOU 240   OD2 ASP  28   1584   4343   6261   -144  -470 41 6
ATOM   241   N   LYS  29   24.098  12.942  51.821  1.000  15.57
ANISOU 241   N   LYS  29   1475   1814   2627   5   -303 17 8
ATOM   242   CA  LYS  29   23.048  13.305  52.778  1.000  15.13
ANISOU 242   CA  LYS  29   1584   1999   2165   -68   -500 - 9 6
ATOM   243   C   LYS  29   21.686  13.500  52.118  1.000  14.56
ANISOU 243   C   LYS  29   1496   1352   2686   77  -452 10 6
ATOM   244   O   LYS  29   20.688  12.985  52.635  1.000  16.21
ANISOU 244   O   LYS  29   1627   1876   2657   -177  -315 - 5
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ATOM    245  CB  LYS  29     23.431  14.563  53.574 1.000 16.09
ANISOU  245  CB  LYS  29     1666    1672    2777     3   -642   -25
ATOM    246  CG  LYS  29     24.776  14.421  54.292 1.000 17.68
ANISOU  246  CG  LYS  29     2192    1918    2606     7  -1144  141
ATOM    247  CD  LYS  29     25.161  15.647  55.096 1.000 20.71
ANISOU  247  CD  LYS  29     2675    2044    3151   -35  -1518   4 1
ATOM    248  CE  LYS  29     26.498  15.331  55.844 1.000 22.24
ANISOU  248  CE  LYS  29     2203    2714    3535   142  -1369  -685
ATOM    249  NZ  LYS  29     26.955  16.594  56.492 1.000 32.67
ANISOU  249  NZ  LYS  29     3199    3381    5831  -502  -2085 -1260
ATOM    250  N   GLY  30     21.604  14.198  50.993 1.000 14.09
ANISOU  250  N   GLY  30     1552    1461    2340   135   -455  -100
ATOM    251  CA  GLY  30     20.358  14.373  50.250 1.000 14.09
ANISOU  251  CA  GLY  30     1428    1561    2365    92   -342   -97
ATOM    252  C   GLY  30     19.372  15.284  50.955 1.000 12.30
ANISOU  252  C   GLY  30     1423    1192    2059   -95   -275  9 4
ATOM    253  O   GLY  30     18.168  15.223  50.696 1.000 14.58
ANISOU  253  O   GLY  30     1435    1689    2415    52   -476  -121
ATOM    254  N   LEU  31     19.884  16.146  51.823 1.000 13.93
ANISOU  254  N   LEU  31     1472    1479    2343  -182   -248  -181
ATOM    255  CA  LEU  31     19.012  17.114  52.511 1.000 14.44
ANISOU  255  CA  LEU  31     1534    1457    2495  -235    -55   -246
ATOM    256  C   LEU  31     19.894  18.286  52.942 1.000 15.08
ANISOU  256  C   LEU  31     1411    1535    2784  -177   -326  -314
ATOM    257  O   LEU  31     21.113  18.136  53.140 1.000 15.64
ANISOU  257  O   LEU  31     1468    1664    2812  -169   -328  - 67
ATOM    258  CB  LEU  31     18.222  16.560  53.694 1.000 16.76
ANISOU  258  CB  LEU  31     2192    1664    2511  -367    128   -213
ATOM    259  CG  LEU  31     18.883  16.517  55.039 1.000 20.16
ANISOU  259  CG  LEU  31     2435    2485    2739  -289   -141 445
ATOM    260  CD1 LEU  31     17.977  16.145  56.202 1.000 26.49
ANISOU  260  CD1 LEU  31     2253    5076    2738  -508   -341 969
ATOM    261  CD2 LEU  31     20.052  15.526  55.032 1.000 24.73
ANISOU  261  CD2 LEU  31     4192    2967    2237  1001    153   610
ATOM    262  N   PHE  32     19.289  19.462  53.052 1.000 14.11
ANISOU  262  N   PHE  32     1569    1457    2335  -231   -179  -207
ATOM    263  CA  PHE  32     20.020  20.697  53.417 1.000 13.56
ANISOU  263  CA  PHE  32     1447    1389    2317  -225   -137  1 4
ATOM    264  C   PHE  32     18.976  21.777  53.687 1.000 13.72
ANISOU  264  C   PHE  32     1411    1439    2365  -218   -421  -142
ATOM    265  O   PHE  32     17.889  21.711  53.118 1.000 15.50
ANISOU  265  O   PHE  32     1392    1862    2634  -175   -436  -389
ATOM    266  CB  PHE  32     20.958  21.157  52.308 1.000 15.01
ANISOU  266  CB  PHE  32     1379    2201    2125  -305   -342 2 31
ATOM    267  CG  PHE  32     20.381  21.156  50.920 1.000 14.60
ANISOU  267  CG  PHE  32     1649    1662    2237  -193   -429 118
ATOM    268  CD1 PHE  32     20.326  19.986  50.148 1.000 14.53
ANISOU  268  CD1 PHE  32     1328    1688    2504  -156   -507  1 5
ATOM    269  CD2 PHE  32     19.831  22.345  50.396 1.000 13.66
ANISOU  269  CD2 PHE  32     1320    1678    2191  -179   -309 1 66
ATOM    270  CE1 PHE  32     19.742  20.033  48.892 1.000 14.26
ANISOU  270  CE1 PHE  32     1507    1655    2256  -346   -271 1 99
ATOM    271  CE2 PHE  32     19.267  22.348  49.138 1.000 15.49
ANISOU  271  CE2 PHE  32     1681    1932    2272    72   -504   -126
ATOM    272  CZ  PHE  32     19.177  21.184  48.385 1.000 15.25
ANISOU  272  CZ  PHE  32     1979    1700    2117  -185   -295 1 68
ATOM    273  N   TYR  33     19.376  22.785  54.442 1.000 14.44
ANISOU  273  N   TYR  33     1813    1302    2372  -237   -496  - 50
ATOM    274  CA  TYR  33     18.616  24.023  54.519 1.000 14.32
ANISOU  274  CA  TYR  33     1764    1415    2261  -143   -295  -111
ATOM    275  C   TYR  33     19.039  24.929  53.364 1.000 13.70
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SUBSTITUTE SHEET (RULE 26)

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ANISOU  275  C   TYR  33   1479      1565      2161    -79   -459 - 5
ATOM    276  O   TYR  33   20.158  24.871  52.859 1.000 15.28
ANISOU  276  O   TYR  33   1370      1524      2912   -190   -420 2 6 3
ATOM    277  CB  TYR  33   18.874  24.734  55.853 1.000 14.47
ANISOU  277  CB  TYR  33   1648      1717      2133   -197   -309 - 1 3 1
ATOM    278  CG  TYR  33   18.231  24.046  57.049 1.000 15.71
ANISOU  278  CG  TYR  33   2131      1537      2302   -339   -109 - 1 3 6
ATOM    279  CD1 TYR  33   16.938  24.390  57.453 1.000 17.41
ANISOU  279  CD1 TYR  33   2478      1967      2172   -154    246  - 249
ATOM    280  CD2 TYR  33   18.912  23.116  57.799 1.000 19.58
ANISOU  280  CD2 TYR  33   2901      2070      2468    144    115  1 9 2
ATOM    281  CE1 TYR  33   16.354  23.758  58.542 1.000 20.18
ANISOU  281  CE1 TYR  33   3138      1948      2581     26    740 - 1 0 2
ATOM    282  CE2 TYR  33   18.368  22.475  58.900 1.000 21.50
ANISOU  282  CE2 TYR  33   3571      2480      2118    340    196  1 2 2
ATOM    283  CZ  TYR  33   17.081  22.821  59.263 1.000 22.02
ANISOU  283  CZ  TYR  33   4140      1772      2454    471   1035 - 1 0 5
ATOM    284  OH  TYR  33   16.541  22.194  60.355 1.000 29.55
ANISOU  284  OH  TYR  33   5088      2809      3329    377   1512 7 2 8
ATOM    285  N   LEU  34   18.076  25.709  52.878 1.000 14.28
ANISOU  285  N   LEU  34   1496      1533      2396    -80   -517 - 1 7
ATOM    286  CA  LEU  34   18.278  26.620  51.756 1.000 15.02
ANISOU  286  CA  LEU  34   1830      1452      2425   -126   -580 2 0
ATOM    287  C   LEU  34   17.871  28.039  52.151 1.000 14.46
ANISOU  287  C   LEU  34   1703      1575      2217   -146   -241 - 7
ATOM    288  O   LEU  34   16.716  28.289  52.492 1.000 16.95
ANISOU  288  O   LEU  34   1663      1852      2923    -75   -186 - 6 4
ATOM    289  CB  LEU  34   17.389  26.127  50.598 1.000 16.54
ANISOU  289  CB  LEU  34   2355      1485      2444   -212   -749 2 5
ATOM    290  CG  LEU  34   17.633  26.800  49.249 1.000 15.65
ANISOU  290  CG  LEU  34   2010      1567      2371     -7   -633  - 6 3
ATOM    291  CD1 LEU  34   18.977  26.422  48.664 1.000 20.14
ANISOU  291  CD1 LEU  34   1919      2018      3717   -225   -171 2 6 0
ATOM    292  CD2 LEU  34   16.490  26.535  48.291 1.000 17.29
ANISOU  292  CD2 LEU  34   2152      1824      2592   -425   -819 2 1 4
ATOM    293  N   THR  35   18.842  28.944  52.065 1.000 15.48
ANISOU  293  N   THR  35   1817      1532      2534   -230   -200 1 3
ATOM    294  CA  THR  35   18.587  30.362  52.324 1.000 17.02
ANISOU  294  CA  THR  35   2149      1537      2781   -206   -827 - 1 9 6
ATOM    295  C   THR  35   18.491  31.127  51.010 1.000 17.04
ANISOU  295  C   THR  35   1895      1693      2887   -149   -882 - 4 4
ATOM    296  O   THR  35   18.765  30.572  49.938 1.000 17.01
ANISOU  296  O   THR  35   1880      1692      2893   -262   -458 1 4 4
ATOM    297  CB  THR  35   19.772  30.917  53.180 1.000 17.79
ANISOU  297  CB  THR  35   2018      1942      2800    -87   -854 - 2 0 0
ATOM    298  OG1 THR  35   20.986  30.673  52.474 1.000 21.10
ANISOU  298  OG1 THR  35   2110      2035      3873   -253   -364 - 4 0 2
ATOM    299  CG2 THR  35   19.847  30.331  54.567 1.000 20.44
ANISOU  299  CG2 THR  35   2600      2194      2971    228  -1113 5 9
ATOM    300  N   ASP  36   18.186  32.407  51.059 1.000 18.62
ANISOU  300  N   ASP  36   2287      1747      3040   -187   -316 1 4 9
ATOM    301  CA  ASP  36   18.240  33.300  49.884 1.000 20.75
ANISOU  301  CA  ASP  36   2678      1722      3483   -632   -508 3 7 4
ATOM    302  C   ASP  36   17.474  32.711  48.703 1.000 20.05
ANISOU  302  C   ASP  36   2104      1929      3586    198   -928 4 8 9
ATOM    303  O   ASP  36   17.929  32.685  47.540 1.000 21.06
ANISOU  303  O   ASP  36   2593      1749      3662   -496   -756 1 3 1
ATOM    304  CB  ASP  36   19.703  33.561  49.500 1.000 22.21
ANISOU  304  CB  ASP  36   2666      2366      3406   -876   -755 8 0 7
ATOM    305  CG  ASP  36   20.588  34.192  50.551 1.000 23.05
ANISOU  305  CG  ASP  36   2537      1818      4402   -175   -833 - 2 0 8
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ATOM     306  OD1 ASP  36   20.061  34.886  51.457 1.000 26.16
ANISOU   306  OD1 ASP  36   2981    2100    4860    378  -777 -3 8 1
ATOM     307  OD2 ASP  36   21.824  33.982  50.528 1.000 24.87
ANISOU   307  OD2 ASP  36   2532    1994    4924    -49  -950 -6 2 8
ATOM     308  N   CYS  37   16.282  32.196  48.971 1.000 20.25
ANISOU   308  N   CYS  37   2135    1711    3849    118  -638 -263
ATOM     309  CA  CYS  37   15.463  31.587  47.902 1.000 20.28
ANISOU   309  CA  CYS  37   2390    1478    3839    136  -799 -138
ATOM     310  C   CYS  37   14.078  32.183  47.818 1.000 19.90
ANISOU   310  C   CYS  37   2374    1724    3463    214  -711 -7 4
ATOM     311  O   CYS  37   13.176  31.629  47.156 1.000 22.75
ANISOU   311  O   CYS  37   2569    1984    4091    -12  -1108 1 5
ATOM     312  CB  CYS  37   15.359  30.061  48.083 1.000 22.21
ANISOU   312  CB  CYS  37   2739    1454    4247    194  -477 -115
ATOM     313  SG  CYS  37   14.500  29.595  49.596 1.000 22.84
ANISOU   313  SG  CYS  37   2854    1884    3942   -203  -922 141
ATOM     314  N   GLY  38   13.855  33.390  48.314 1.000 20.85
ANISOU   314  N   GLY  38   2353    1638    3933    217  -375 -4 2
ATOM     315  CA  GLY  38   12.570  34.044  48.194 1.000 23.42
ANISOU   315  CA  GLY  38   2233    1874    4790    255  -292 16 5
ATOM     316  C   GLY  38   11.534  33.619  49.217 1.000 23.29
ANISOU   316  C   GLY  38   2577    2045    4228    113  -136 -6 0 1
ATOM     317  O   GLY  38   10.400  34.091  49.129 1.000 25.58
ANISOU   317  O   GLY  38   2529    3424    3765    214  -96  -2 6 4
ATOM     318  N   LEU  39   11.894  32.836  50.237 1.000 24.55
ANISOU   318  N   LEU  39   2310    2980    4037    119  -46  -364
ATOM     319  CA  LEU  39   10.938  32.331  51.195 1.000 24.44
ANISOU   319  CA  LEU  39   2637    2964    3684   -105   175 -9 4 6
ATOM     320  C   LEU  39   11.107  32.885  52.593 1.000 35.41
ANISOU   320  C   LEU  39   5341    4215    3898   -796   165 -1435
ATOM     321  O   LEU  39   11.784  32.313  53.441 1.000 43.41
ANISOU   321  O   LEU  39   7338    4986    4171  -2639 -1333 -3 0 3
ATOM     322  CB  LEU  39   10.850  30.810  51.206 1.000 26.48
ANISOU   322  CB  LEU  39   4244    2940    2879     49  -70 -2 6 1
ATOM     323  CG  LEU  39   10.404  30.097  49.921 1.000 30.21
ANISOU   323  CG  LEU  39   4834    2452    4195    258 -1618 -4 7 4
ATOM     324  CD1 LEU  39   10.683  28.595  49.972 1.000 24.78
ANISOU   324  CD1 LEU  39   3351    2597    3468    424  -707 -118
ATOM     325  CD2 LEU  39   8.940   30.407  49.640 1.000 27.50
ANISOU   325  CD2 LEU  39   4828    2118    3503    860  -860 -3 2 3
ATOM     326  N   THR  40   10.365  33.957  52.882 1.000 45.58
ANISOU   326  N   THR  40   7392    4849    5077   -520  2852 -1993
ATOM     327  CA  THR  40   10.610  34.661  54.136 1.000 32.50
ANISOU   327  CA  THR  40   4224    3732    4393    999   961  -5 5 8
ATOM     328  C   THR  40   9.700   34.177  55.248 1.000 29.68
ANISOU   328  C   THR  40   3175    4204    3898   -116   294 -1630
ATOM     329  O   THR  40   8.653   33.556  55.031 1.000 39.75
ANISOU   329  O   THR  40   3930    5847    5326  -1079  -301 -1653
ATOM     330  CB  THR  40   10.641  36.183  53.997 1.000 56.31
ANISOU   330  CB  THR  40   10586   3758    7052  -1417  1006 -9 9 2
ATOM     331  OG1 THR  40   11.545  36.606  52.946 1.000 68.39
ANISOU   331  OG1 THR  40   7379    3900    14707 -1978  3617 -2 4 6
ATOM     332  CG2 THR  40   11.214  36.837  55.256 1.000 70.22
ANISOU   332  CG2 THR  40   8265    5228    13188  1389 -4422 -3 2 4 1
ATOM     333  N   ASP  41   10.191  34.302  56.486 1.000 33.20
ANISOU   333  N   ASP  41   3580    5223    3810   -203   307 -1779
ATOM     334  CA  ASP  41   9.329   33.943  57.613 1.000 27.51
ANISOU   334  CA  ASP  41   2705    3858    3891     91  -253 -1061
ATOM     335  C   ASP  41   8.107   34.861  57.660 1.000 33.43
ANISOU   335  C   ASP  41   3131    3064    6508     32   547 -1307
ATOM     336  O   ASP  41   7.034   34.469  58.101 1.000 30.76
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- 24 -

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ANISOU 336  O   ASP 41  2690   3223   5774    141  -149 -969
ATOM   337  CB  ASP 41  10.113 34.135 58.915 1.000 33.51
ANISOU 337  CB  ASP 41  4853   4026   3852  -1222 -698 -938
ATOM   338  CG  ASP 41  9.453  33.351 60.039 1.000 33.37
ANISOU 338  CG  ASP 41  3324   5291   4065   -739 -501 -571
ATOM   339  OD1 ASP 41  9.152  32.164 59.780 1.000 34.95
ANISOU 339  OD1 ASP 41  4040   4681   4557   -380  824  -92
ATOM   340  OD2 ASP 41  9.395  33.904 61.161 1.000 86.76
ANISOU 340  OD2 ASP 41  18972  10427  3567 -10425 588 -1858
ATOM   341  N   THR 42  8.272  36.089 57.205 1.000 32.71
ANISOU 341  N   THR 42  3217   3695   5516     9  -58 -586
ATOM   342  CA  THR 42  7.198  37.074 57.221 1.000 38.48
ANISOU 342  CA  THR 42  4747   4161   5711   1067 -861 -630
ATOM   343  C   THR 42  6.005  36.640 56.375 1.000 35.83
ANISOU 343  C   THR 42  3333   4044   6237   1136  157 -1162
ATOM   344  O   THR 42  4.877  36.606 56.900 1.000 38.90
ANISOU 344  O   THR 42  4048   3603   7128   1186 1059 1224
ATOM   345  CB  THR 42  7.751  38.449 56.815 1.000 37.05
ANISOU 345  CB  THR 42  4526   3763   5788   1021 -677 -1532
ATOM   346  OG1 THR 42  8.831  38.301 55.889 1.000 98.08
ANISOU 346  OG1 THR 42  16381  13757  7127  -3208 7500 -2318
ATOM   347  CG2 THR 42  8.358  39.113 58.047 1.000 36.08
ANISOU 347  CG2 THR 42  6097   3613   3997    886 -1119 269
ATOM   348  N   GLU 43  6.259  36.184 55.173 1.000 34.64
ANISOU 348  N   GLU 43  4208   3312   5642    656 -275 -698
ATOM   349  CA  GLU 43  5.391  35.557 54.192 1.000 32.98
ANISOU 349  CA  GLU 43  3527   2886   6120   1199 -883 -152
ATOM   350  C   GLU 43  4.701  34.300 54.713 1.000 41.67
ANISOU 350  C   GLU 43  3454   4151   8229    225 -1743 953
ATOM   351  O   GLU 43  3.484  34.124 54.605 1.000 38.53
ANISOU 351  O   GLU 43  3375   4041   7222    589 -1417 -578
ATOM   352  CB  GLU 43  6.278  35.074 53.026 1.000 44.72
ANISOU 352  CB  GLU 43  5991   4098   6901     28  137 -2137
ATOM   353  CG  GLU 43  6.658  36.125 52.003 1.000 53.42
ANISOU 353  CG  GLU 43  5931   6417   7949   -993 1540 -1338
ATOM   354  CD  GLU 43  7.838  36.976 52.429 1.000 50.41
ANISOU 354  CD  GLU 43  4087   7601   7467   -439 2486 -1725
ATOM   355  OE1 GLU 43  8.024  37.112 53.661 1.000 59.44
ANISOU 355  OE1 GLU 43  7237   7592   7757  -1284 1632 -2146
ATOM   356  OE2 GLU 43  8.555  37.476 51.531 1.000 71.33
ANISOU 356  OE2 GLU 43  11550  6344   9207  -4131 6267 -4645
ATOM   357  N   LEU 44  5.511  33.373 55.224 1.000 27.80
ANISOU 357  N   LEU 44  2837   2924   4802    -55 -626 -227
ATOM   358  CA  LEU 44  4.926  32.222 55.902 1.000 27.88
ANISOU 358  CA  LEU 44  2207   3379   5009    241  813 -382
ATOM   359  C   LEU 44  3.886  32.670 56.934 1.000 34.30
ANISOU 359  C   LEU 44  1930   4771   6333   -537  776 -2629
ATOM   360  O   LEU 44  2.781  32.159 56.924 1.000 33.35
ANISOU 360  O   LEU 44  2046   5235   5390   -840  705 -2397
ATOM   361  CB  LEU 44  5.999  31.394 56.587 1.000 24.59
ANISOU 361  CB  LEU 44  2781   3494   3070     81  940 -74
ATOM   362  CG  LEU 44  5.592  30.147 57.343 1.000 31.76
ANISOU 362  CG  LEU 44  2414   5135   4517   -845  792 1217
ATOM   363  CD1 LEU 44  4.563  29.328 56.575 1.000 47.71
ANISOU 363  CD1 LEU 44  5860   7081   5188  -3576 3333 -2541
ATOM   364  CD2 LEU 44  6.793  29.259 57.653 1.000 51.56
ANISOU 364  CD2 LEU 44  6294   3688   9608   1956 2240 1382
ATOM   365  N   LYS 45  4.212  33.712 57.694 1.000 41.91
ANISOU 365  N   LYS 45  2865   6802   6256  -1455  381 -3537
ATOM   366  CA  LYS 45  3.369  34.195 58.773 1.000 44.31
ANISOU 366  CA  LYS 45  4768   5427   6639     74  837 -2985
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ATOM    367  C   LYS 45   1.981  34.582  58.278 1.000 38.58
ANISOU  367  C   LYS 45   4535    3445    6681   -245  1221 -2820
ATOM    368  O   LYS 45   0.984  34.238  58.902 1.000 39.93
ANISOU  368  O   LYS 45   4857    3594    6720    262  1634 -2337
ATOM    369  CB  LYS 45   4.038  35.400  59.447 1.000 50.20
ANISOU  369  CB  LYS 45   4944    5561    8569   1081  -447 -3980
ATOM    370  CG  LYS 45   3.082  36.546  59.706 1.000 53.07
ANISOU  370  CG  LYS 45   3548    6321   10296   1148 -2094 -4809
ATOM    371  CD  LYS 45   3.714  37.922  59.622 1.000 58.29
ANISOU  371  CD  LYS 45   4723    5694   11730   1422 -3745 -5024
ATOM    372  CE  LYS 45   3.199  38.793  60.761 1.000 65.33
ANISOU  372  CE  LYS 45   6294    6898   11629   1072 -3430 -5603
ATOM    373  NZ  LYS 45   1.713  38.779  60.852 1.000 73.75
ANISOU  373  NZ  LYS 45   6392    9216   12412   -718 -1071 -7436
ATOM    374  N   SER 46   1.973  35.341  57.193 1.000 36.94
ANISOU  374  N   SER 46   4074    3478    6484   -956  1068 -2939
ATOM    375  CA  SER 46   0.743  35.856  56.607 1.000 37.61
ANISOU  375  CA  SER 46   3983    3417    6892  -1335   988 -2335
ATOM    376  C   SER 46  -0.137  34.702  56.137 1.000 34.45
ANISOU  376  C   SER 46   3430    3057    6602  -1104  1656 -2394
ATOM    377  O   SER 46  -1.337  34.625  56.449 1.000 29.50
ANISOU  377  O   SER 46   3195    2789    5224   -587  1093 -1206
ATOM    378  CB  SER 46   1.160  36.726  55.419 1.000 40.36
ANISOU  378  CB  SER 46   4102    3809    7425  -2099   617 -1930
ATOM    379  OG  SER 46   0.018  37.017  54.630 1.000 43.38
ANISOU  379  OG  SER 46   5005    3431    8048  -1261    53 -1863
ATOM    380  N   ALA 47   0.493  33.808  55.361 1.000 29.82
ANISOU  380  N   ALA 47   3246    2173    5910    -18   809 -1228
ATOM    381  CA  ALA 47  -0.208  32.623  54.879 1.000 25.84
ANISOU  381  CA  ALA 47   3566    2106    4148      7   630  -891
ATOM    382  C   ALA 47  -0.722  31.792  56.058 1.000 25.02
ANISOU  382  C   ALA 47   2591    2344    4572    481   280  -280
ATOM    383  O   ALA 47  -1.888  31.381  56.063 1.000 23.19
ANISOU  383  O   ALA 47   2850    2366    3597    129   318 -1119
ATOM    384  CB  ALA 47   0.615  31.791  53.912 1.000 26.76
ANISOU  384  CB  ALA 47   2892    2764    4511    270   351 -1134
ATOM    385  N   LYS 48   0.132  31.529  57.041 1.000 24.64
ANISOU  385  N   LYS 48   3107    2076    4178    130   -57 -1085
ATOM    386  CA  LYS 48  -0.186  30.712  58.202 1.000 25.83
ANISOU  386  CA  LYS 48   3545    2979    3291    -16    30 -1416
ATOM    387  C   LYS 48  -1.337  31.339  59.003 1.000 28.58
ANISOU  387  C   LYS 48   3373    3344    4144   -354   129 -2041
ATOM    388  O   LYS 48  -2.310  30.694  59.396 1.000 27.04
ANISOU  388  O   LYS 48   3849    2793    3633    312   419  -634
ATOM    389  CB  LYS 48   1.035  30.654  59.149 1.000 28.95
ANISOU  389  CB  LYS 48   3507    3294    4200   -274  -257  -738
ATOM    390  CG  LYS 48   0.775  29.694  60.313 1.000 32.96
ANISOU  390  CG  LYS 48   4412    3214    4897    113  -543  -156
ATOM    391  CD  LYS 48   1.418  30.222  61.570 1.000 39.92
ANISOU  391  CD  LYS 48   5828    4616    4724    705 -1278   -39
ATOM    392  CE  LYS 48   1.217  29.320  62.769 1.000 33.67
ANISOU  392  CE  LYS 48   3973    4020    4799   1402  -205  -356
ATOM    393  NZ  LYS 48   0.731  30.100  63.946 1.000 38.33
ANISOU  393  NZ  LYS 48   4516    5230    4816    916 -1039 -1555
ATOM    394  N   ASP 49  -1.253  32.656  59.255 1.000 23.78
ANISOU  394  N   ASP 49   2796    3136    3104     79  -459 -1588
ATOM    395  CA  ASP 49  -2.298  33.326  60.006 1.000 24.05
ANISOU  395  CA  ASP 49   2826    2913    3398   -291   366 -1043
ATOM    396  C   ASP 49  -3.679  33.181  59.366 1.000 24.45
ANISOU  396  C   ASP 49   2721    3270    3300   -220   555 -1454
ATOM    397  O   ASP 49  -4.637  32.951  60.082 1.000 27.10
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ANISOU  397  O    ASP  49  2863   3177   4257   -368   1004  -1544
ATOM    398  CB   ASP  49  -2.034 34.824 60.167 1.000 30.34
ANISOU  398  CB   ASP  49  3695   3210   4623   -559   713   -2178
ATOM    399  CG   ASP  49  -0.924 35.181 61.128 1.000 37.18
ANISOU  399  CG   ASP  49  5259   4057   4810   -1109  -211  -2007
ATOM    400  OD1  ASP  49  -0.556 34.266 61.904 1.000 33.36
ANISOU  400  OD1  ASP  49  3717   4549   4408   -737   888   -1727
ATOM    401  OD2  ASP  49  -0.525 36.375 61.087 1.000 48.45
ANISOU  401  OD2  ASP  49  7960   3575   6875   -927   -2887 -2409
ATOM    402  N    LEU  50  -3.788 33.402 58.059 1.000 24.46
ANISOU  402  N    LEU  50  3114   2668   3513   374    200   -1298
ATOM    403  CA   LEU  50  -5.123 33.344 57.471 1.000 22.92
ANISOU  403  CA   LEU  50  2949   2145   3614   161    397   -562
ATOM    404  C    LEU  50  -5.679 31.937 57.328 1.000 21.79
ANISOU  404  C    LEU  50  3345   2197   2737   33 417 -556
ATOM    405  O    LEU  50  -6.878 31.741 57.475 1.000 24.96
ANISOU  405  O    LEU  50  3463   2502   3517   -276   766   -1181
ATOM    406  CB   LEU  50  -5.254 34.137 56.194 1.000 22.13
ANISOU  406  CB   LEU  50  3127   2016   3266   -103   524   -757
ATOM    407  CG   LEU  50  -6.661 34.578 55.807 1.000 28.87
ANISOU  407  CG   LEU  50  3549   3538   3881   961    825   208
ATOM    408  CD1  LEU  50  -7.389 35.082 57.049 1.000 52.72
ANISOU  408  CD1  LEU  50  4567   8556   6907   940    2929  -1936
ATOM    409  CD2  LEU  50  -6.644 35.642 54.723 1.000 41.07
ANISOU  409  CD2  LEU  50  6971   3395   5240   -1005  -2258 857
ATOM    410  N    VAL  51  -4.801 30.956 57.138 1.000 21.78
ANISOU  410  N    VAL  51  3345   2052   2877   -160   216   -860
ATOM    411  CA   VAL  51  -5.293 29.580 57.118 1.000 19.40
ANISOU  411  CA   VAL  51  2631   2056   2683   -12    173   -303
ATOM    412  C    VAL  51  -5.631 29.135 58.533 1.000 25.25
ANISOU  412  C    VAL  51  4453   2656   2485   -753   587   -955
ATOM    413  O    VAL  51  -6.652 28.454 58.725 1.000 25.07
ANISOU  413  O    VAL  51  4555   2176   2795   -484   1185  -827
ATOM    414  CB   VAL  51  -4.377 28.589 56.396 1.000 18.78
ANISOU  414  CB   VAL  51  2729   1786   2620   -72    171   -313
ATOM    415  CG1  VAL  51  -3.152 28.238 57.231 1.000 20.42
ANISOU  415  CG1  VAL  51  3002   1841   2918   295    -13   -480
ATOM    416  CG2  VAL  51  -5.147 27.306 56.021 1.000 24.10
ANISOU  416  CG2  VAL  51  3112   2337   3708   -511   355   -846
ATOM    417  N    ILE  52  -4.836 29.500 59.534 1.000 25.23
ANISOU  417  N    ILE  52  4514   2471   2603   388    76 -874
ATOM    418  CA   ILE  52  -5.205 29.114 60.921 1.000 24.38
ANISOU  418  CA   ILE  52  3488   3010   2765   248    19 -509
ATOM    419  C    ILE  52  -6.498 29.771 61.355 1.000 24.20
ANISOU  419  C    ILE  52  3026   2482   3687   -354   114   -648
ATOM    420  O    ILE  52  -7.328 29.182 62.071 1.000 27.73
ANISOU  420  O    ILE  52  3735   2812   3989   -198   614   -334
ATOM    421  CB   ILE  52  -4.016 29.427 61.829 1.000 27.59
ANISOU  421  CB   ILE  52  3321   4347   2815   590    0   -785
ATOM    422  CG1  ILE  52  -2.853 28.439 61.510 1.000 31.45
ANISOU  422  CG1  ILE  52  3278   5248   3425   741    363   -1288
ATOM    423  CG2  ILE  52  -4.293 29.312 63.317 1.000 33.62
ANISOU  423  CG2  ILE  52  3827   6199   2750   881    150   -1454
ATOM    424  CD1  ILE  52  -1.930 28.351 62.710 1.000 36.22
ANISOU  424  CD1  ILE  52  3956   5082   4722   979    -601  -234
ATOM    425  N    ASP  53  -6.771 30.992 60.913 1.000 24.56
ANISOU  425  N    ASP  53  3479   2878   2974   165    609   -426
ATOM    426  CA   ASP  53  -8.051 31.646 61.278 1.000 23.50
ANISOU  426  CA   ASP  53  3242   2942   2745   -5 355 -677
ATOM    427  C    ASP  53  -9.201 30.929 60.594 1.000 26.34
ANISOU  427  C    ASP  53  3462   2986   3561   -435   612   -1064
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ATOM    428   O    ASP  53  -10.342 30.836  61.051 1.000 29.73
ANISOU  428   O    ASP  53   3468     3085    4743   -436  937  -1142
ATOM    429   CB   ASP  53   -7.964 33.084  60.772 1.000 33.83
ANISOU  429   CB   ASP  53   3800     2322    6730    -92 1806  -933
ATOM    430   CG   ASP  53   -9.308 33.758  60.583 1.000 32.05
ANISOU  430   CG   ASP  53   4652     2412    5113    172 -302  -1138
ATOM    431   OD1  ASP  53   -9.653 34.524  61.486 1.000 43.68
ANISOU  431   OD1  ASP  53   3661     4686    8248    150 1379  -3120
ATOM    432   OD2  ASP  53   -9.950 33.556  59.532 1.000 51.30
ANISOU  432   OD2  ASP  53   8386     6074    5033  -2062 -1738  922
ATOM    433   N    PHE  54   -8.933 30.376  59.413 1.000 25.39
ANISOU  433   N    PHE  54   3372     2640    3637     72   71  -1176
ATOM    434   CA   PHE  54   -9.917 29.557  58.704 1.000 24.10
ANISOU  434   CA   PHE  54   3015     3264    2876   -366  263  -539
ATOM    435   C    PHE  54  -10.180 28.259  59.456 1.000 24.00
ANISOU  435   C    PHE  54   3264     3174    2680   -365  459  -688
ATOM    436   O    PHE  54  -11.333 27.893  59.686 1.000 28.19
ANISOU  436   O    PHE  54   3551     3246    3914   -549 1305  -1130
ATOM    437   CB   PHE  54   -9.465 29.273  57.263 1.000 23.62
ANISOU  437   CB   PHE  54   3241     2955    2779   -249  218  -434
ATOM    438   CG   PHE  54  -10.522 28.499  56.461 1.000 27.62
ANISOU  438   CG   PHE  54   4712     2945    2838   -694 -636  1 4
ATOM    439   CD1  PHE  54  -11.729 29.078  56.087 1.000 31.38
ANISOU  439   CD1  PHE  54   3613     4658    3654   -951 -262  -621
ATOM    440   CD2  PHE  54  -10.283 27.210  56.033 1.000 30.92
ANISOU  440   CD2  PHE  54   5782     3589    2377   -831  293  -844
ATOM    441   CE1  PHE  54  -12.653 28.406  55.307 1.000 44.29
ANISOU  441   CE1  PHE  54   5504     5404    5919  -3066 -2057  1178
ATOM    442   CE2  PHE  54  -11.228 26.503  55.306 1.000 38.69
ANISOU  442   CE2  PHE  54   7997     4412    2289  -2803  155  -387
ATOM    443   CZ   PHE  54  -12.424 27.092  54.927 1.000 42.33
ANISOU  443   CZ   PHE  54   5992     6305    3787  -4256   54  -446
ATOM    444   N    PHE  55   -9.126 27.558  59.870 1.000 25.87
ANISOU  444   N    PHE  55   3787     2768    3276    -85  431  -839
ATOM    445   CA   PHE  55   -9.195 26.310  60.625 1.000 25.69
ANISOU  445   CA   PHE  55   3567     3042    3151     68  763  -711
ATOM    446   C    PHE  55   -9.929 26.484  61.944 1.000 27.69
ANISOU  446   C    PHE  55   3357     3961    3205    181  703  -719
ATOM    447   O    PHE  55  -10.745 25.670  62.373 1.000 30.08
ANISOU  447   O    PHE  55   4046     4165    3217    142  878  -127
ATOM    448   CB   PHE  55   -7.759 25.873  60.932 1.000 25.48
ANISOU  448   CB   PHE  55   3556     3159    2964    117  835  -638
ATOM    449   CG   PHE  55   -7.019 25.242  59.762 1.000 26.31
ANISOU  449   CG   PHE  55   3437     3039    3522   -468 1068  -1156
ATOM    450   CD1  PHE  55   -7.611 24.820  58.590 1.000 27.09
ANISOU  450   CD1  PHE  55   3553     3895    2845  -1018 1404  -658
ATOM    451   CD2  PHE  55   -5.651 25.031  59.935 1.000 31.68
ANISOU  451   CD2  PHE  55   3244     4185    4609   -726 1123  -2221
ATOM    452   CE1  PHE  55   -6.878 24.150  57.621 1.000 23.89
ANISOU  452   CE1  PHE  55   3472     2525    3079    -58  551  -547
ATOM    453   CE2  PHE  55   -4.904 24.433  58.950 1.000 31.74
ANISOU  453   CE2  PHE  55   3487     4387    4186    226  337  -2304
ATOM    454   CZ   PHE  55   -5.514 24.004  57.770 1.000 24.23
ANISOU  454   CZ   PHE  55   3706     2187    3312    414  -22  -416
ATOM    455   N    GLU  56   -9.633 27.581  62.629 1.000 30.39
ANISOU  455   N    GLU  56   3961     5033    2553   -308  520  -1110
ATOM    456   CA   GLU  56  -10.222 27.875  63.925 1.000 30.18
ANISOU  456   CA   GLU  56   4160     4504    2805   -734 1221  -637
ATOM    457   C    GLU  56  -11.650 28.401  63.820 1.000 33.50
ANISOU  457   C    GLU  56   4324     4124    4280   -535 1489  -892
ATOM    458   O    GLU  56  -12.470 28.149  64.708 1.000 44.44
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SUBSTITUTE SHEET (RULE 26)

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ANISOU 458   O    GLU  56   3864      8872      4150    93 1013   1011
ATOM   459   CB   GLU  56   -9.403  28.978   64.615 1.000 35.85
ANISOU 459   CB   GLU  56   5037      5109      3475   -221  574   -1821
ATOM   460   CG   GLU  56   -8.192  28.508   65.401 1.000 38.63
ANISOU 460   CG   GLU  56   4804      7152      2721   -337  763   -1692
ATOM   461   CD   GLU  56   -7.395  29.699   65.916 1.000 45.55
ANISOU 461   CD   GLU  56   5576      7183      4546   -24  -295  -2330
ATOM   462   OE1  GLU  56   -7.935  30.828   65.888 1.000 55.54
ANISOU 462   OE1  GLU  56   7344      7247      6512    586 2570  -3059
ATOM   463   OE2  GLU  56   -6.246  29.492   66.350 1.000 50.41
ANISOU 463   OE2  GLU  56   4050     10497      4606  -1066 1163  -2063
ATOM   464   N    HIS  57  -11.890  29.289   62.866 1.000 32.20
ANISOU 464   N    HIS  57   3273      4700      4261   -549 1540   -670
ATOM   465   CA   HIS  57  -13.101  30.078   62.909 1.000 33.38
ANISOU 465   CA   HIS  57   3795      4885      4002   -110 1553  -1239
ATOM   466   C    HIS  57  -13.981  29.873   61.697 1.000 32.85
ANISOU 466   C    HIS  57   3380      4736      4367    278 1506  -1797
ATOM   467   O    HIS  57  -15.012  30.533   61.571 1.000 37.09
ANISOU 467   O    HIS  57   3362      4733      5998    276 1087  -2205
ATOM   468   CB   HIS  57  -12.802  31.573   62.976 1.000 37.39
ANISOU 468   CB   HIS  57   4327      4959      4922   -193 1402  -1970
ATOM   469   CG   HIS  57  -11.981  31.949   64.162 1.000 36.99
ANISOU 469   CG   HIS  57   4111      5046      4896    680 1344  -2319
ATOM   470   ND1  HIS  57  -12.465  31.917   65.453 1.000 38.84
ANISOU 470   ND1  HIS  57   5090      4844      4823   -171 1362  -1598
ATOM   471   CD2  HIS  57  -10.707  32.387   64.232 1.000 37.91
ANISOU 471   CD2  HIS  57   5259      4197      4947   -891 1544  -2828
ATOM   472   CE1  HIS  57  -11.510  32.305   66.275 1.000 40.37
ANISOU 472   CE1  HIS  57   5481      5191      4668   -243 1087  -1361
ATOM   473   NE2  HIS  57  -10.441  32.592   65.552 1.000 35.63
ANISOU 473   NE2  HIS  57   4420      4376      4743    980  799   -1492
ATOM   474   N    GLY  58  -13.464  29.068   60.786 1.000 32.06
ANISOU 474   N    GLY  58   4402      3186      4594      5 1572  -1525
ATOM   475   CA   GLY  58  -14.290  28.731   59.627 1.000 35.74
ANISOU 475   CA   GLY  58   4508      4402      4669  -1129 1877  -1893
ATOM   476   C    GLY  58  -15.449  27.859   60.099 1.000 31.52
ANISOU 476   C    GLY  58   3317      3688      4969    308 1657   -593
ATOM   477   O    GLY  58  -15.245  26.952   60.922 1.000 32.66
ANISOU 477   O    GLY  58   4561      4176      3674   -204  624  -1012
ATOM   478   N    SER  59  -16.632  28.152   59.574 1.000 31.03
ANISOU 478   N    SER  59   3786      3623      4379    519 1142  -1442
ATOM   479   CA   SER  59  -17.823  27.359   59.859 1.000 32.03
ANISOU 479   CA   SER  59   3305      3925      4939    757  850  -1188
ATOM   480   C    SER  59  -17.763  26.034   59.117 1.000 37.27
ANISOU 480   C    SER  59   3654      4001      6507      0 2065  -1682
ATOM   481   O    SER  59  -16.987  25.858   58.181 1.000 31.23
ANISOU 481   O    SER  59   3027      3655      5184    613 1003  -1174
ATOM   482   CB   SER  59  -19.077  28.136   59.444 1.000 39.80
ANISOU 482   CB   SER  59   3930      5925      5266   1707 -545  -2846
ATOM   483   OG   SER  59  -19.252  28.159   58.029 1.000 35.38
ANISOU 483   OG   SER  59   3505      4800      5137    355  119  -1624
ATOM   484   N    GLU  60  -18.589  25.065   59.507 1.000 46.32
ANISOU 484   N    GLU  60   5438      6083      6078  -2395 2115  -2700
ATOM   485   CA   GLU  60  -18.573  23.801   58.754 1.000 34.21
ANISOU 485   CA   GLU  60   3381      4798      4818   -960  716  -1238
ATOM   486   C    GLU  60  -19.033  24.055   57.330 1.000 34.22
ANISOU 486   C    GLU  60   4659      3711      4632    455 1378   -847
ATOM   487   O    GLU  60  -18.616  23.437   56.361 1.000 29.91
ANISOU 487   O    GLU  60   3708      3040      4615   -679 2037   -604
ATOM   488   CB   GLU  60  -19.390  22.742   59.488 1.000 38.26
ANISOU 488   CB   GLU  60   5012      5567      3958  -1599  748  -1000
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ATOM    489  CG  GLU  60  -18.625 22.182  60.678 1.000 42.01
ANISOU  489  CG  GLU  60  5470     5439    5055    503    950   -782
ATOM    490  CD  GLU  60  -17.307 21.528  60.312 1.000 45.34
ANISOU  490  CD  GLU  60  4036     7496    5695   -885   1094  -2276
ATOM    491  OE1 GLU  60  -17.219 20.867  59.264 1.000 49.69
ANISOU  491  OE1 GLU  60  5383     6689    6809   -864   1730  -2838
ATOM    492  OE2 GLU  60  -16.323 21.659  61.084 1.000 43.62
ANISOU  492  OE2 GLU  60  4677     4974    6924  -1984   109    -12
ATOM    493  N   ALA  61  -19.928 25.028  57.167 1.000 34.26
ANISOU  493  N   ALA  61  3091     3912    6014    -81   1209  -1122
ATOM    494  CA  ALA  61  -20.408 25.324  55.823 1.000 33.07
ANISOU  494  CA  ALA  61  1647     4409    6508   -228    657  -1105
ATOM    495  C   ALA  61  -19.314 25.876  54.938 1.000 30.69
ANISOU  495  C   ALA  61  2053     3742    5866    -59    640  -1066
ATOM    496  O   ALA  61  -19.138 25.482  53.790 1.000 31.15
ANISOU  496  O   ALA  61  2754     2893    6189     31    793  -1285
ATOM    497  CB  ALA  61  -21.543 26.336  55.932 1.000 34.43
ANISOU  497  CB  ALA  61  2783     4403    5897    288   1210  -1650
ATOM    498  N   GLU  62  -18.568 26.824  55.498 1.000 28.80
ANISOU  498  N   GLU  62  2168     3404    5371     -9    915   -964
ATOM    499  CA  GLU  62  -17.478 27.395  54.704 1.000 26.78
ANISOU  499  CA  GLU  62  2339     2374    5461    423    871   -413
ATOM    500  C   GLU  62  -16.432 26.330  54.389 1.000 22.61
ANISOU  500  C   GLU  62  2569     1621    4402     84   1049   -376
ATOM    501  O   GLU  62  -15.851 26.316  53.289 1.000 24.41
ANISOU  501  O   GLU  62  2399     2669    4209   -132    801   -548
ATOM    502  CB  GLU  62  -16.861 28.591  55.429 1.000 32.86
ANISOU  502  CB  GLU  62  3129     2117    7239    251   2039  -1358
ATOM    503  CG  GLU  62  -17.739 29.834  55.554 1.000 34.69
ANISOU  503  CG  GLU  62  2824     2859    7499    916    -95  -1430
ATOM    504  CD  GLU  62  -17.274 30.810  56.616 1.000 38.93
ANISOU  504  CD  GLU  62  4998     2780    7014   1622    224  -1820
ATOM    505  OE1 GLU  62  -16.861 30.391  57.717 1.000 40.92
ANISOU  505  OE1 GLU  62  4844     3636    7068   1268     34  -1673
ATOM    506  OE2 GLU  62  -17.324 32.041  56.385 1.000 45.13
ANISOU  506  OE2 GLU  62  7600     2889    6658   -525   1698  -1099
ATOM    507  N   LYS  63  -16.193 25.431  55.345 1.000 25.20
ANISOU  507  N   LYS  63  2470     2380    4723    312   1050     8
ATOM    508  CA  LYS  63  -15.214 24.369  55.207 1.000 21.62
ANISOU  508  CA  LYS  63  2608     2894    2712    688    349   -446
ATOM    509  C   LYS  63  -15.708 23.397  54.147 1.000 22.42
ANISOU  509  C   LYS  63  2930     3038    2549     84    433   -217
ATOM    510  O   LYS  63  -14.913 23.038  53.289 1.000 24.17
ANISOU  510  O   LYS  63  3340     2354    3491    239    782   -790
ATOM    511  CB  LYS  63  -14.940 23.650  56.534 1.000 24.50
ANISOU  511  CB  LYS  63  3411     3057    2842     42   -105   -299
ATOM    512  CG  LYS  63  -13.963 24.465  57.381 1.000 27.58
ANISOU  512  CG  LYS  63  4640     2792    3045   -302   -465   -306
ATOM    513  CD  LYS  63  -13.866 23.937  58.811 1.000 26.09
ANISOU  513  CD  LYS  63  3132     3570    3211    305   -575    -12
ATOM    514  CE  LYS  63  -12.761 24.695  59.560 1.000 28.96
ANISOU  514  CE  LYS  63  4342     3579    3083   -317   -286   -792
ATOM    515  NZ  LYS  63  -12.927 24.614  61.030 1.000 35.00
ANISOU  515  NZ  LYS  63  4884     5356    3057     64   -298   -817
ATOM    516  N   ARG  64  -17.007 23.112  54.143 1.000 29.82
ANISOU  516  N   ARG  64  3238     2676    5418   -533   1111  -1259
ATOM    517  CA  ARG  64  -17.521 22.169  53.118 1.000 25.56
ANISOU  517  CA  ARG  64  2396     2474    4841   -170   1252   -962
ATOM    518  C   ARG  64  -17.417 22.735  51.708 1.000 28.45
ANISOU  518  C   ARG  64  3022     2681    5106    153   1369   -562
ATOM    519  O   ARG  64  -17.149 21.981  50.759 1.000 22.57
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SUBSTITUTE SHEET (RULE 26)

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ANISOU  519   O    ARG  64   1672     2466      4436    -71    148  -395
ATOM    520   CB   ARG  64  -18.937 21.809   53.537 1.000 32.48
ANISOU  520   CB   ARG  64   2669     4144      5526   -809   1483 -1029
ATOM    521   CG   ARG  64  -19.094 20.442   54.189 1.000 45.55
ANISOU  521   CG   ARG  64   4444     4749      8116  -2443   1343  -153
ATOM    522   CD   ARG  64  -20.557 19.985   54.080 1.000 59.48
ANISOU  522   CD   ARG  64   5723     6760     10116  -3977  -2863  2461
ATOM    523   NE   ARG  64  -20.759 19.485   52.714 1.000 77.63
ANISOU  523   NE   ARG  64  10254     9303      9938  -4031  -4193  2666
ATOM    524   CZ   ARG  64  -21.166 20.236   51.696 1.000 60.23
ANISOU  524   CZ   ARG  64   5289     6952     10644  -1128  -4334   501
ATOM    525   NH1  ARG  64  -21.424 21.528   51.892 1.000 91.64
ANISOU  525   NH1  ARG  64  18286     5072     11461  -5082  -3134   -75
ATOM    526   NH2  ARG  64  -21.286 19.711   50.489 1.000 43.67
ANISOU  526   NH2  ARG  64   3318     4095      9178   -183  -1521  2085
ATOM    527   N    ALA  65  -17.624 24.041   51.515 1.000 26.71
ANISOU  527   N    ALA  65   1907     2770      5472    189    936  -556
ATOM    528   CA   ALA  65  -17.522 24.661   50.199 1.000 24.91
ANISOU  528   CA   ALA  65   1798     2379      5288    280    417  -754
ATOM    529   C    ALA  65  -16.109 24.575   49.595 1.000 21.81
ANISOU  529   C    ALA  65   1808     2408      4071    597    155  -626
ATOM    530   O    ALA  65  -15.935 24.724   48.381 1.000 24.13
ANISOU  530   O    ALA  65   2127     3076      3964    224   -220  -485
ATOM    531   CB   ALA  65  -18.023 26.096   50.221 1.000 31.78
ANISOU  531   CB   ALA  65   3096     2984      5993   1337   1401  -453
ATOM    532   N    VAL  66  -15.098 24.306   50.426 1.000 19.29
ANISOU  532   N    VAL  66   1836     1880      3614    466    360  -541
ATOM    533   CA   VAL  66  -13.723 24.167   49.953 1.000 18.17
ANISOU  533   CA   VAL  66   1636     1653      3616    204     79  -487
ATOM    534   C    VAL  66  -13.166 22.767   50.248 1.000 15.18
ANISOU  534   C    VAL  66   1516     1638      2613    120    126  -571
ATOM    535   O    VAL  66  -11.959 22.623   50.353 1.000 17.63
ANISOU  535   O    VAL  66   1567     2071      3060    217   -106  -317
ATOM    536   CB   VAL  66  -12.784 25.277   50.437 1.000 18.91
ANISOU  536   CB   VAL  66   2175     1576      3433    183   -135  -598
ATOM    537   CG1  VAL  66  -13.139 26.627   49.805 1.000 20.60
ANISOU  537   CG1  VAL  66   2067     1751      4010    219    593   -83
ATOM    538   CG2  VAL  66  -12.736 25.373   51.945 1.000 21.61
ANISOU  538   CG2  VAL  66   2689     2066      3455    102     22  -603
ATOM    539   N    THR  67  -14.048 21.792   50.343 1.000 18.30
ANISOU  539   N    THR  67   1761     1614      3577    -20     -6  -514
ATOM    540   CA   THR  67  -13.673 20.403   50.563 1.000 17.18
ANISOU  540   CA   THR  67   1927     1656      2946    -32     50  -556
ATOM    541   C    THR  67  -13.979 19.566   49.332 1.000 16.52
ANISOU  541   C    THR  67   1763     1742      2773     21 27  -467
ATOM    542   O    THR  67  -15.107 19.613   48.811 1.000 18.13
ANISOU  542   O    THR  67   1750     2211      2929     73  -86  -383
ATOM    543   CB   THR  67  -14.373 19.791   51.782 1.000 18.54
ANISOU  543   CB   THR  67   2202     2014      2827    192    224  -492
ATOM    544   OG1  THR  67  -14.060 20.554   52.961 1.000 20.14
ANISOU  544   OG1  THR  67   2481     2251      2920   -108    155  -468
ATOM    545   CG2  THR  67  -13.912 18.364   52.017 1.000 20.04
ANISOU  545   CG2  THR  67   2393     2016      3203     29  -86  -235
ATOM    546   N    SER  68  -13.030 18.818   48.821 1.000 16.71
ANISOU  546   N    SER  68   1612     1720      3018   -135    154  -498
ATOM    547   CA   SER  68  -13.281 17.947   47.688 1.000 16.33
ANISOU  547   CA   SER  68   1508     1631      3065   -184    365  -561
ATOM    548   C    SER  68  -14.223 16.795   48.057 1.000 14.85
ANISOU  548   C    SER  68   1194     1775      2672    -81    197  -448
ATOM    549   O    SER  68  -14.303 16.431   49.233 1.000 16.36
ANISOU  549   O    SER  68   1783     1775      2659   -145    192  -481
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ATOM    550  CB  SER  68   -11.958 17.303  47.257 1.000 17.84
ANISOU  550  CB  SER  68    1459    2139    3182   -87   647  -313
ATOM    551  OG  SER  68   -10.998 18.259  46.904 1.000 17.21
ANISOU  551  OG  SER  68    1659    1987    2893   -75   364   -49
ATOM    552  N   PRO  69   -14.929 16.284  47.054 1.000 15.89
ANISOU  552  N   PRO  69    1574    1661    2803  -201  -103  -280
ATOM    553  CA  PRO  69   -15.877 15.182  47.339 1.000 16.42
ANISOU  553  CA  PRO  69    1428    1903    2908  -251  -148  -218
ATOM    554  C   PRO  69   -15.168 13.889  47.684 1.000 17.22
ANISOU  554  C   PRO  69    1633    1578    3331  -199   266  -424
ATOM    555  O   PRO  69   -15.794 12.997  48.287 1.000 18.35
ANISOU  555  O   PRO  69    1815    1760    3399  -365   232  -376
ATOM    556  CB  PRO  69   -16.712 15.057  46.060 1.000 16.75
ANISOU  556  CB  PRO  69    1354    2279    2733  -360   155  -729
ATOM    557  CG  PRO  69   -15.799 15.637  45.008 1.000 16.72
ANISOU  557  CG  PRO  69    1553    1971    2827  -359    38  -452
ATOM    558  CD  PRO  69   -15.059 16.797  45.681 1.000 17.10
ANISOU  558  CD  PRO  69    1918    1804    2776  -344  -119  -313
ATOM    559  N   VAL  70   -13.884 13.746  47.366 1.000 18.07
ANISOU  559  N   VAL  70    1716    1764    3384   -89   292  -215
ATOM    560  CA  VAL  70   -13.100 12.594  47.824 1.000 17.34
ANISOU  560  CA  VAL  70    1763    1851    2974   -20   260  -196
ATOM    561  C   VAL  70   -11.995 13.142  48.720 1.000 17.59
ANISOU  561  C   VAL  70    2207    1686    2788  -180   159  -142
ATOM    562  O   VAL  70   -11.431 14.186  48.389 1.000 18.59
ANISOU  562  O   VAL  70    1794    1688    3581   -49   15    2
ATOM    563  CB  VAL  70   -12.429 11.757  46.724 1.000 18.10
ANISOU  563  CB  VAL  70    1922    1756    3199  -353   560  -446
ATOM    564  CG1 VAL  70   -13.441 10.754  46.213 1.000 20.54
ANISOU  564  CG1 VAL  70    1927    2611    3268  -369    76  -663
ATOM    565  CG2 VAL  70   -11.760 12.608  45.642 1.000 17.65
ANISOU  565  CG2 VAL  70    2379    1806    2520   145     9   10
ATOM    566  N   PRO  71   -11.697 12.466  49.815 1.000 16.21
ANISOU  566  N   PRO  71    1653    1810    2695   -34   464  -156
ATOM    567  CA  PRO  71   -10.839 13.091  50.833 1.000 17.32
ANISOU  567  CA  PRO  71    1795    1931    2854  -121   184   -12
ATOM    568  C   PRO  71    -9.356 12.804  50.590 1.000 17.67
ANISOU  568  C   PRO  71    1865    1927    2921    46   -57  156
ATOM    569  O   PRO  71    -8.585 12.223  51.350 1.000 20.57
ANISOU  569  O   PRO  71    2218    2247    3350   424    28  474
ATOM    570  CB  PRO  71   -11.362 12.458  52.117 1.000 19.76
ANISOU  570  CB  PRO  71    2976    1862    2668  -347   479  -304
ATOM    571  CG  PRO  71   -11.721 11.056  51.670 1.000 19.08
ANISOU  571  CG  PRO  71    2838    1805    2608  -267   259  -234
ATOM    572  CD  PRO  71   -12.323 11.220  50.286 1.000 17.97
ANISOU  572  CD  PRO  71    2314    1974    2538  -390   451  -167
ATOM    573  N   THR  72    -8.894 13.338  49.446 1.000 17.15
ANISOU  573  N   THR  72    1677    2231    2610  -215   -17  -165
ATOM    574  CA  THR  72    -7.573 13.012  48.935 1.000 16.83
ANISOU  574  CA  THR  72    1721    1863    2810   -60  -134  -472
ATOM    575  C   THR  72    -6.490 14.000  49.358 1.000 15.20
ANISOU  575  C   THR  72    1791    1623    2362  -304   163   -73
ATOM    576  O   THR  72    -5.320 13.729  49.104 1.000 17.49
ANISOU  576  O   THR  72    1776    1961    2908   -61   -31  -225
ATOM    577  CB  THR  72    -7.533 12.971  47.399 1.000 16.18
ANISOU  577  CB  THR  72    1552    1848    2748  -146   -86  -261
ATOM    578  OG1 THR  72    -8.091 14.238  47.005 1.000 17.81
ANISOU  578  OG1 THR  72    1856    1880    3031   -34   115  -191
ATOM    579  CG2 THR  72    -8.338 11.816  46.825 1.000 17.49
ANISOU  579  CG2 THR  72    1953    2087    2605  -550   181  -329
ATOM    580  N   MET  73    -6.877 15.098  49.987 1.000 17.78
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- 32 -

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ANISOU 580  N   MET 73  2057  1748   2951   -58  -254 -426
ATOM   581  CA  MET 73  -5.867 16.117 50.394 1.000 16.58
ANISOU 581  CA  MET 73  1796  1708   2797    88  -302 -340
ATOM   582  C   MET 73  -5.073 16.618 49.198 1.000 16.65
ANISOU 582  C   MET 73  1514  1787   3027   241  -162 -420
ATOM   583  O   MET 73  -3.911 17.039 49.292 1.000 19.39
ANISOU 583  O   MET 73  1705  2313   3348  -112  -240 -540
ATOM   584  CB  MET 73  -4.925 15.531 51.469 1.000 20.56
ANISOU 584  CB  MET 73  2099  2629   3083   345  -507 -286
ATOM   585  CG  MET 73  -5.703 15.154 52.715 1.000 30.33
ANISOU 585  CG  MET 73  3008  5133   3384   -69  -609 1027
ATOM   586  SD  MET 73  -4.692 14.263 53.891 1.000 36.13
ANISOU 586  SD  MET 73  4121  5050   4558   336  -918 1596
ATOM   587  CE  MET 73  -3.165 13.987 53.082 1.000 58.07
ANISOU 587  CE  MET 73  2810  8820  10435   975 -1592 -3138
ATOM   588  N   ARG 74  -5.687 16.632 48.025 1.000 16.83
ANISOU 588  N   ARG 74  1699  1714   2982    -6  -211  131
ATOM   589  CA  ARG 74  -5.099 17.215 46.817 1.000 15.87
ANISOU 589  CA  ARG 74  1365  1618   3046   -17    52 -325
ATOM   590  C   ARG 74  -5.359 18.714 46.761 1.000 14.22
ANISOU 590  C   ARG 74  1484  1651   2269   141   -32  -42
ATOM   591  O   ARG 74  -4.472 19.488 46.353 1.000 15.45
ANISOU 591  O   ARG 74  1525  1758   2586   -12   -46  -73
ATOM   592  CB  ARG 74  -5.675 16.530 45.566 1.000 15.68
ANISOU 592  CB  ARG 74  1330  1667   2959   160   -14 -311
ATOM   593  CG  ARG 74  -4.890 16.941 44.299 1.000 16.46
ANISOU 593  CG  ARG 74  1325  1870   3059  -175    55 -395
ATOM   594  CD  ARG 74  -5.655 16.396 43.072 1.000 16.37
ANISOU 594  CD  ARG 74  1789  1533   2899  -181    -8 -177
ATOM   595  NE  ARG 74  -4.840 16.601 41.857 1.000 19.21
ANISOU 595  NE  ARG 74  2289  1990   3020  -142   241 -156
ATOM   596  CZ  ARG 74  -4.944 17.626 41.039 1.000 17.00
ANISOU 596  CZ  ARG 74  1545  2351   2562   -67    26 -147
ATOM   597  NH1 ARG 74  -5.878 18.573 41.213 1.000 18.00
ANISOU 597  NH1 ARG 74  1818  2383   2638    51   -66 -220
ATOM   598  NH2 ARG 74  -4.144 17.703 39.987 1.000 20.50
ANISOU 598  NH2 ARG 74  2285  2972   2532  -110   310 -387
ATOM   599  N   ARG 75  -6.579 19.151 47.101 1.000 15.28
ANISOU 599  N   ARG 75  1755  1544   2507   137   340 -173
ATOM   600  CA  ARG 75  -6.999 20.550 46.980 1.000 14.68
ANISOU 600  CA  ARG 75  1679  1627   2272   236    98 -150
ATOM   601  C   ARG 75  -7.956 20.869 48.122 1.000 14.75
ANISOU 601  C   ARG 75  1445  1747   2414   124   133 -233
ATOM   602  O   ARG 75  -8.760 19.989 48.460 1.000 18.12
ANISOU 602  O   ARG 75  1677  2109   3101  -156   458 -433
ATOM   603  CB  ARG 75  -7.747 20.804 45.668 1.000 15.59
ANISOU 603  CB  ARG 75  1577  2030   2317     1    46 -106
ATOM   604  CG  ARG 75  -6.848 20.634 44.441 1.000 15.63
ANISOU 604  CG  ARG 75  1495  2110   2334     9   147  220
ATOM   605  CD  ARG 75  -5.712 21.618 44.334 1.000 15.59
ANISOU 605  CD  ARG 75  1658  1792   2475    11   130  -10
ATOM   606  NE  ARG 75  -5.061 21.601 43.011 1.000 15.25
ANISOU 606  NE  ARG 75  1421  1779   2596   122   227  144
ATOM   607  CZ  ARG 75  -3.957 20.865 42.732 1.000 14.90
ANISOU 607  CZ  ARG 75  1079  2361   2221    71   -86  242
ATOM   608  NH1 ARG 75  -3.405 20.091 43.664 1.000 16.18
ANISOU 608  NH1 ARG 75  1804  1722   2623  -134  -387  337
ATOM   609  NH2 ARG 75  -3.418 20.940 41.518 1.000 15.83
ANISOU 609  NH2 ARG 75  1677  2107   2232  -193   221    0
ATOM   610  N   GLY 76  -7.895 22.086 48.651 1.000 16.06
ANISOU 610  N   GLY 76  1686  1904   2513   109   220 -464
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ATOM    611  CA  GLY  76   -8.858 22.532 49.637 1.000 16.67
ANISOU  611  CA  GLY  76   1650   2260   2425   -70   199  -612
ATOM    612  C   GLY  76   -8.602 22.002 51.036 1.000 16.32
ANISOU  612  C   GLY  76   1584   2014   2602  -126   268  -347
ATOM    613  O   GLY  76   -7.469 21.651 51.370 1.000 16.87
ANISOU  613  O   GLY  76   1638   1998   2773   -45   308  -218
ATOM    614  N   PHE  77   -9.643 22.025 51.863 1.000 16.88
ANISOU  614  N   PHE  77   1597   2141   2675    -7   283  -191
ATOM    615  CA  PHE  77   -9.584 21.646 53.274 1.000 17.61
ANISOU  615  CA  PHE  77   1838   2196   2656   109   328  -114
ATOM    616  C   PHE  77   -9.776 20.154 53.512 1.000 17.64
ANISOU  616  C   PHE  77   1855   2248   2600   -68   243  -185
ATOM    617  O   PHE  77  -10.589 19.528 52.831 1.000 18.23
ANISOU  617  O   PHE  77   1844   2488   2594  -183   357  -240
ATOM    618  CB  PHE  77  -10.698 22.383 53.998 1.000 17.70
ANISOU  618  CB  PHE  77   1730   2515   2480   162    65  -344
ATOM    619  CG  PHE  77  -10.877 22.081 55.473 1.000 19.61
ANISOU  619  CG  PHE  77   2405   2530   2515   195   261  -516
ATOM    620  CD1 PHE  77   -9.966 22.594 56.395 1.000 22.27
ANISOU  620  CD1 PHE  77   2514   3523   2426   431   -23  -527
ATOM    621  CD2 PHE  77  -11.917 21.285 55.941 1.000 21.31
ANISOU  621  CD2 PHE  77   3282   2070   2743    36   615  -288
ATOM    622  CE1 PHE  77  -10.116 22.294 57.742 1.000 21.05
ANISOU  622  CE1 PHE  77   2719   2768   2510   171   221  -339
ATOM    623  CE2 PHE  77  -12.079 20.991 57.300 1.000 25.09
ANISOU  623  CE2 PHE  77   2967   4120   2447  -501   625  -826
ATOM    624  CZ  PHE  77  -11.175 21.523 58.207 1.000 23.79
ANISOU  624  CZ  PHE  77   2263   3681   3095    -1   376  -756
ATOM    625  N   THR  78   -9.022 19.631 54.490 1.000 17.64
ANISOU  625  N   THR  78   1616   2161   2925    37   336    1
ATOM    626  CA  THR  78   -9.296 18.279 54.983 1.000 18.12
ANISOU  626  CA  THR  78   1926   2243   2717  -157   624   -28
ATOM    627  C   THR  78   -9.291 18.316 56.505 1.000 18.66
ANISOU  627  C   THR  78   2120   2308   2663  -367   519  -288
ATOM    628  O   THR  78   -8.335 18.821 57.095 1.000 21.42
ANISOU  628  O   THR  78   2158   2883   3098  -432    90  177
ATOM    629  CB  THR  78   -8.252 17.242 54.521 1.000 21.00
ANISOU  629  CB  THR  78   2973   2067   2939   113   428  -574
ATOM    630  OG1 THR  78   -8.027 17.392 53.104 1.000 21.18
ANISOU  630  OG1 THR  78   2544   2671   2833   160   317  -773
ATOM    631  CG2 THR  78   -8.735 15.832 54.800 1.000 26.65
ANISOU  631  CG2 THR  78   3759   2227   4141  -275   853  -618
ATOM    632  N   GLY  79  -10.311 17.804 57.181 1.000 20.36
ANISOU  632  N   GLY  79   2669   2379   2690  -670   630  -144
ATOM    633  CA  GLY  79  -10.344 17.679 58.623 1.000 25.96
ANISOU  633  CA  GLY  79   3871   3249   2745  -790   576  375
ATOM    634  C   GLY  79  -10.029 16.238 59.039 1.000 39.70
ANISOU  634  C   GLY  79   6407   3542   5135 -1658 -1944 1511
ATOM    635  O   GLY  79  -10.623 15.303 58.491 1.000 31.02
ANISOU  635  O   GLY  79   4327   3187   4272  -404   419   -75
ATOM    636  N   LEU  80   -9.069 16.055 59.936 1.000 36.07
ANISOU  636  N   LEU  80   4380   4536   4788  1381  -564  -835
ATOM    637  CA  LEU  80   -8.634 14.713 60.340 1.000 32.52
ANISOU  637  CA  LEU  80   3640   4083   4632   611  -502  -898
ATOM    638  C   LEU  80   -9.131 14.311 61.716 1.000 39.82
ANISOU  638  C   LEU  80   5051   4652   5428  -128   418  -538
ATOM    639  O   LEU  80   -9.998 14.963 62.305 1.000 37.05
ANISOU  639  O   LEU  80   5057   3807   5213  -292   666    8  7
ATOM    640  CB  LEU  80   -7.122 14.580 60.265 1.000 38.36
ANISOU  640  CB  LEU  80   3821   5456   5299  1568   -33 -1406
ATOM    641  CG  LEU  80   -6.488 14.753 58.883 1.000 38.27
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ANISOU  641   CG  LEU   80          3714    5900    4926    725   -288  -2589
ATOM    642   CD1 LEU   80  -5.007  14.359  58.948 1.000 45.41
ANISOU  642   CD1 LEU   80          2579    8505    6170  -1092    -76    3 7
ATOM    643   CD2 LEU   80  -7.170  13.856  57.854 1.000 40.75
ANISOU  643   CD2 LEU   80          4296    5601    5587    872  -1965  -1793
ATOM    644   N   SER   98  -6.459  17.442  63.930 1.000 36.72
ANISOU  644   N   SER   98          3404    6429    4118  -2114   -698 1948
ATOM    645   CA  SER   98  -5.629  17.877  62.824 1.000 39.59
ANISOU  645   CA  SER   98          6031    5376    3635   -449    383  2177
ATOM    646   C   SER   98  -6.402  18.372  61.610 1.000 29.89
ANISOU  646   C   SER   98          3806    3509    4040    141    640  1204
ATOM    647   O   SER   98  -7.474  17.856  61.304 1.000 38.27
ANISOU  647   O   SER   98          4936    4300    5303  -1107    395   885
ATOM    648   CB  SER   98  -4.694  16.739  62.358 1.000 44.06
ANISOU  648   CB  SER   98          3175    7425    6141    633   -753 2704
ATOM    649   OG  SER   98  -3.672  17.368  61.583 1.000 46.84
ANISOU  649   OG  SER   98          3497    6502    7797     95   -408  2418
ATOM    650   N   MET   99  -5.829  19.317  60.869 1.000 28.56
ANISOU  650   N   MET   99          5029    3458    2365  -1080   -550 546
ATOM    651   CA  MET   99  -6.426  19.941  59.700 1.000 21.44
ANISOU  651   CA  MET   99          2284    3549    2315   -182    157   132
ATOM    652   C   MET   99  -5.376  20.229  58.624 1.000 19.16
ANISOU  652   C   MET   99          2306    2592    2382   -433     60 137
ATOM    653   O   MET   99  -4.232  20.575  58.930 1.000 23.34
ANISOU  653   O   MET   99          2489    3920    2460   -773    225   -410
ATOM    654   CB  MET   99  -7.164  21.209  60.105 1.000 25.20
ANISOU  654   CB  MET   99          3172    3375    3028   -572    661   -547
ATOM    655   CG  MET   99  -8.481  20.965  60.872 1.000 25.85
ANISOU  655   CG  MET   99          3172    3862    2787   -275    739   -782
ATOM    656   SD  MET   99  -9.251  22.517  61.389 1.000 32.21
ANISOU  656   SD  MET   99          4405    3750    4083   -133   1580  -568
ATOM    657   CE  MET   99  -8.884  22.461  63.145 1.000 76.12
ANISOU  657   CE  MET   99         14782   11538    2603  -3321   3478 -3241
ATOM    658   N   CYS  100  -5.778  20.094  57.361 1.000 18.85
ANISOU  658   N   CYS  100          2434    2443    2285   -160     93 194
ATOM    659   CA  CYS  100  -4.868  20.333  56.234 1.000 18.55
ANISOU  659   CA  CYS  100          2251    2380    2418     92 127 236
ATOM    660   C   CYS  100  -5.496  21.312  55.228 1.000 16.26
ANISOU  660   C   CYS  100          1826    2031    2321    110    329    2
ATOM    661   O   CYS  100  -6.728  21.308  55.071 1.000 17.69
ANISOU  661   O   CYS  100          1741    2395    2586    -69    154   -104
ATOM    662   CB  CYS  100  -4.604  18.982  55.545 1.000 18.46
ANISOU  662   CB  CYS  100          2822    2081    2111     98 118 511
ATOM    663   SG  CYS  100  -3.243  18.974  54.329 1.000 22.76
ANISOU  663   SG  CYS  100          2622    2968    3058    307    391    1 0
ATOM    664   N   TYR  101  -4.697  22.069  54.498 1.000 17.49
ANISOU  664   N   TYR  101          1839    2473    2332     46 291 224
ATOM    665   CA  TYR  101  -5.117  22.874  53.373 1.000 15.38
ANISOU  665   CA  TYR  101          1946    1939    1960    -50     90  -262
ATOM    666   C   TYR  101  -4.102  22.594  52.245 1.000 13.65
ANISOU  666   C   TYR  101          1676    1543    1967     -2   -123   -151
ATOM    667   O   TYR  101  -2.896  22.629  52.475 1.000 15.95
ANISOU  667   O   TYR  101          1611    2231    2217    -43   -232  -212
ATOM    668   CB  TYR  101  -5.122  24.382  53.739 1.000 19.02
ANISOU  668   CB  TYR  101          2816    2082    2328    234     48  -519
ATOM    669   CG  TYR  101  -5.617  25.109  52.498 1.000 17.85
ANISOU  669   CG  TYR  101          2084    1895    2804     18    -26  -231
ATOM    670   CD1 TYR  101  -6.964  25.134  52.171 1.000 18.25
ANISOU  670   CD1 TYR  101          2042    1596    3298     29 28  -496
ATOM    671   CD2 TYR  101  -4.730  25.778  51.658 1.000 17.77
ANISOU  671   CD2 TYR  101          2037    1611    3106    -46   -125  -127
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ATOM    672  CE1 TYR  101 -7.406  25.796  51.036 1.000 19.63
ANISOU  672  CE1 TYR  101 1977    1776    3704   88 -241  -2 2 1
ATOM    673  CE2 TYR  101 -5.147  26.386  50.478 1.000 20.46
ANISOU  673  CE2 TYR  101 2060    2608    3108   239   40 1 8 2
ATOM    674  CZ  TYR  101 -6.504  26.392  50.166 1.000 20.29
ANISOU  674  CZ  TYR  101 2187    2397    3127   -73  -353 -2 6 0
ATOM    675  OH  TYR  101 -6.932  26.995  49.000 1.000 23.34
ANISOU  675  OH  TYR  101 2790    2555    3523   -3  -641   5 2
ATOM    676  N   SER  102 -4.648  22.210  51.097 1.000 14.60
ANISOU  676  N   SER  102 1618    1890    2041   -61  -109 -4 7 7
ATOM    677  CA  SER  102 -3.797  21.792  49.980 1.000 14.52
ANISOU  677  CA  SER  102 1684    1802    2030   -108  62 -2 7 6
ATOM    678  C   SER  102 -4.011  22.670  48.747 1.000 14.99
ANISOU  678  C   SER  102 1545    1790    2361   -296 -41   2 1
ATOM    679  O   SER  102 -5.167  23.105  48.477 1.000 16.73
ANISOU  679  O   SER  102 1589    2342    2425   2  128  - 3
ATOM    680  CB  SER  102 -4.163  20.340  49.593 1.000 13.82
ANISOU  680  CB  SER  102 1692    1548    2013   174    9  -1 3 8
ATOM    681  OG  SER  102 -3.996  19.476  50.720 1.000 16.06
ANISOU  681  OG  SER  102 1886    2066    2153   97 -121   6 3
ATOM    682  N   MET  103 -2.978  22.775  47.920 1.000 14.47
ANISOU  682  N   MET  103 1568    1724    2206   51 -59 1 5 2
ATOM    683  CA  MET  103 -3.102  23.552  46.687 1.000 16.58
ANISOU  683  CA  MET  103 2194    1933    2173   331   -74  2 5 3
ATOM    684  C   MET  103 -2.150  23.013  45.608 1.000 14.41
ANISOU  684  C   MET  103 1598    1793    2083   -202 -210 6 3
ATOM    685  O   MET  103 -1.157  22.347  45.920 1.000 16.24
ANISOU  685  O   MET  103 1527    2384    2259   -61  -23  4 6 8
ATOM    686  CB  MET  103 -2.716  25.004  46.835 1.000 28.78
ANISOU  686  CB  MET  103 6537    1318    3081   859  -207 3 6 6
ATOM    687  CG  MET  103 -3.258  25.986  47.801 1.000 22.60
ANISOU  687  CG  MET  103 2531    2157    3900   -161  -57  -2 9 1
ATOM    688  SD  MET  103 -2.338  27.505  47.506 1.000 20.60
ANISOU  688  SD  MET  103 2499    1927    3400   -4 -164   -2 2 6
ATOM    689  CE  MET  103 -2.587  27.945  45.804 1.000 21.63
ANISOU  689  CE  MET  103 2319    2601    3300   308  209  -2 3 6
ATOM    690  N   GLY  104 -2.439  23.430  44.378 1.000 15.44
ANISOU  690  N   GLY  104 1468    2228    2169   -68  -120 1 6 4
ATOM    691  CA  GLY  104 -1.511  23.199  43.276 1.000 16.13
ANISOU  691  CA  GLY  104 1688    2202    2241   42 65 4 6 9
ATOM    692  C   GLY  104 -1.583  24.355  42.294 1.000 15.76
ANISOU  692  C   GLY  104 1706    1997    2286   -32  -194 3 8 8
ATOM    693  O   GLY  104 -1.987  25.478  42.653 1.000 19.06
ANISOU  693  O   GLY  104 1953    2032    3256   -71  144  3 3 3
ATOM    694  N   THR  105 -1.151  24.092  41.054 1.000 16.73
ANISOU  694  N   THR  105 1685    2385    2287   -375  -55  5 1 5
ATOM    695  CA  THR  105 -1.115  25.205  40.094 1.000 17.06
ANISOU  695  CA  THR  105 1725    2390    2369   -231  -148 5 7 7
ATOM    696  C   THR  105 -2.513  25.631  39.635 1.000 19.55
ANISOU  696  C   THR  105 1768    1817    3842   -160  -346 5 2 5
ATOM    697  O   THR  105 -2.680  26.703  39.059 1.000 22.41
ANISOU  697  O   THR  105 2262    2116    4136   -119  -520 8 4 2
ATOM    698  CB  THR  105 -0.301  24.857  38.840 1.000 17.57
ANISOU  698  CB  THR  105 1759    2877    2038   -394  -343 3 7 7
ATOM    699  OG1 THR  105 -0.865  23.675  38.217 1.000 18.66
ANISOU  699  OG1 THR  105 2035    2449    2607   -140  -458 4 1 6
ATOM    700  CG2 THR  105 1.155   24.590  39.178 1.000 18.95
ANISOU  700  CG2 THR  105 1748    2853    2601   -105  -248 2 9 6
ATOM    701  N   ALA  106 -3.507  24.751  39.741 1.000 16.52
ANISOU  701  N   ALA  106 1596    2293    2389   -180  -1 2 9 8
ATOM    702  CA  ALA  106 -4.846  25.035  39.218 1.000 16.59
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ANISOU 702  CA  ALA  106 1692      1952      2660    -214  -209 2 4 3
ATOM   703  C   ALA  106 -5.848  24.142  39.923 1.000 17.52
ANISOU 703  C   ALA  106 1651      1821      3186     26  -66 5 5 5
ATOM   704  O   ALA  106 -5.479  23.323  40.805 1.000 17.88
ANISOU 704  O   ALA  106 2038      2087      2668     59  -51 3 8 8
ATOM   705  CB  ALA  106 -4.862  24.838  37.713 1.000 20.31
ANISOU 705  CB  ALA  106 2331      2764      2620    -197  -403 4 4 0
ATOM   706  N   ASP  107 -7.149  24.329  39.717 1.000 18.00
ANISOU 706  N   ASP  107 1576      2208      3057     -77  -120 4  9
ATOM   707  CA  ASP  107 -8.217  23.535  40.344 1.000 17.46
ANISOU 707  CA  ASP  107 1563      2191      2881     -83  -472 3 6 3
ATOM   708  C   ASP  107 -8.173  23.753  41.859 1.000 17.74
ANISOU 708  C   ASP  107 1825      2044      2869     447  -269 3 6 2
ATOM   709  O   ASP  107 -8.458  22.854  42.650 1.000 18.95
ANISOU 709  O   ASP  107 1994      2230      2974     167  -133 4 0 2
ATOM   710  CB  ASP  107 -8.089  22.044  39.990 1.000 19.62
ANISOU 710  CB  ASP  107 2213      2300      2942    -394  -727 1 7 3
ATOM   711  CG  ASP  107 -8.370  21.842  38.508 1.000 20.81
ANISOU 711  CG  ASP  107 1952      3093      2862    -138  -532 - 1 4
ATOM   712  OD1 ASP  107 -9.369  22.369  37.976 1.000 25.84
ANISOU 712  OD1 ASP  107 2524      3967      3327     222  -1149 - 2 4 0
ATOM   713  OD2 ASP  107 -7.544  21.168  37.844 1.000 25.86
ANISOU 713  OD2 ASP  107 3314      2989      3523     391   -91 - 8 9
ATOM   714  N   ASN  108 -7.893  24.962  42.298 1.000 18.18
ANISOU 714  N   ASN  108 2049      2075      2786     509   189 1 5 3
ATOM   715  CA  ASN  108 -7.831  25.263  43.740 1.000 17.10
ANISOU 715  CA  ASN  108 1804      1977      2715     266   291 3 2 7
ATOM   716  C   ASN  108 -9.158  25.716  44.314 1.000 17.11
ANISOU 716  C   ASN  108 1705      2061      2734     367    44 1 4 9
ATOM   717  O   ASN  108 -10.103 26.086  43.604 1.000 20.72
ANISOU 717  O   ASN  108 2066      2377      3430     759  -248 2 4 5
ATOM   718  CB  ASN  108 -6.799  26.379  43.969 1.000 19.90
ANISOU 718  CB  ASN  108 1770      2308      3483     186   298 - 1 7 1
ATOM   719  CG  ASN  108 -5.400  25.862  43.717 1.000 17.24
ANISOU 719  CG  ASN  108 1709      2212      2628     200    68 1 8 4
ATOM   720  OD1 ASN  108 -4.986  24.850  44.277 1.000 17.42
ANISOU 720  OD1 ASN  108 2003      1984      2631     109    11 - 6 2
ATOM   721  ND2 ASN  108 -4.644  26.487  42.834 1.000 18.41
ANISOU 721  ND2 ASN  108 2083      2326      2587     -82   300  - 1 8
ATOM   722  N   LEU  109 -9.308  25.509  45.607 1.000 18.09
ANISOU 722  N   LEU  109 1795      2294      2786     349   344 1 0
ATOM   723  CA  LEU  109 -10.532 25.803  46.369 1.000 19.11
ANISOU 723  CA  LEU  109 1763      2200      3296      14   476 - 5 9 8
ATOM   724  C   LEU  109 -10.169 26.790  47.457 1.000 17.40
ANISOU 724  C   LEU  109 1682      1937      2990     251   129 - 2 0 7
ATOM   725  O   LEU  109 -9.443  26.423  48.395 1.000 21.18
ANISOU 725  O   LEU  109 2443      1922      3684     174  -520 2
ATOM   726  CB  LEU  109 -11.100 24.504  46.940 1.000 17.10
ANISOU 726  CB  LEU  109 1888      2142      2469     199   426  - 6 3 0
ATOM   727  CG  LEU  109 -11.520 23.425  45.944 1.000 18.07
ANISOU 727  CG  LEU  109 2515      1943      2409     190  -198 - 3 6 3
ATOM   728  CD1 LEU  109 -11.895 22.124  46.654 1.000 20.06
ANISOU 728  CD1 LEU  109 2842      2406      2375    -331  -175 - 2 0 0
ATOM   729  CD2 LEU  109 -12.630 23.908  45.035 1.000 25.24
ANISOU 729  CD2 LEU  109 3481      2892      3217     306  -992 - 1 1 1
ATOM   730  N   PHE  110 -10.609 28.036  47.313 1.000 17.25
ANISOU 730  N   PHE  110 1584      1926      3045     272   184  - 1 3 2
ATOM   731  CA  PHE  110 -10.235 29.071  48.277 1.000 18.20
ANISOU 731  CA  PHE  110 1751      1816      3346     169   221  - 1 6 0
ATOM   732  C   PHE  110 -11.409 29.567  49.106 1.000 19.93
ANISOU 732  C   PHE  110 2077      1609      3886      71 650  - 3 3 5
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- 37 -

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ATOM     733  O    PHE  110 -12.433 29.948  48.494 1.000 24.64
ANISOU   733  O    PHE  110  2051   2461   4851   612    328   -779
ATOM     734  CB   PHE  110  -9.607 30.243  47.520 1.000 19.92
ANISOU   734  CB   PHE  110  2367   1876   3324   224    619    -93
ATOM     735  CG   PHE  110  -8.380 29.986  46.688 1.000 19.47
ANISOU   735  CG   PHE  110  2009   2209   3179  -321    327   -791
ATOM     736  CD1  PHE  110  -7.177 29.680  47.287 1.000 20.59
ANISOU   736  CD1  PHE  110  2071   2080   3674  -274    236   -331
ATOM     737  CD2  PHE  110  -8.437 30.035  45.299 1.000 20.19
ANISOU   737  CD2  PHE  110  2557   1914   3200   112    543   -289
ATOM     738  CE1  PHE  110  -6.034 29.454  46.559 1.000 21.06
ANISOU   738  CE1  PHE  110  2020   2309   3673  -386    165   -622
ATOM     739  CE2  PHE  110  -7.277 29.811  44.547 1.000 20.77
ANISOU   739  CE2  PHE  110  2495   2138   3257   197    504   -398
ATOM     740  CZ   PHE  110  -6.081 29.518  45.175 1.000 22.42
ANISOU   740  CZ   PHE  110  2747   2092   3678   531    339   -357
ATOM     741  N    PRO  111 -11.238 29.718  50.416 1.000 22.11
ANISOU   741  N    PRO  111  2250   2153   3996   -72    871   -620
ATOM     742  CA   PRO  111 -12.287 30.389  51.195 1.000 28.23
ANISOU   742  CA   PRO  111  3895   2210   4621   698   1514   -671
ATOM     743  C    PRO  111 -12.333 31.866  50.784 1.000 30.57
ANISOU   743  C    PRO  111  4528   2026   5061   410    410  -1041
ATOM     744  O    PRO  111 -11.390 32.340  50.115 1.000 31.71
ANISOU   744  O    PRO  111  4040   2236   5774  -179   -597   -12
ATOM     745  CB   PRO  111 -11.799 30.250  52.627 1.000 33.20
ANISOU   745  CB   PRO  111  5609   2702   4303   671   1671   -790
ATOM     746  CG   PRO  111 -10.646 29.326  52.647 1.000 26.04
ANISOU   746  CG   PRO  111  2742   3316   3835  -931   1324   -192
ATOM     747  CD   PRO  111 -10.161 29.149  51.230 1.000 22.15
ANISOU   747  CD   PRO  111  2587   2307   3522  -471    541   -623
ATOM     748  N    SER  112 -13.337 32.641  51.150 1.000 42.13
ANISOU   748  N    SER  112  7176   2716   6115   2074  1731   -526
ATOM     749  CA   SER  112 -13.368 34.026  50.672 1.000 44.05
ANISOU   749  CA   SER  112  6799   2255   7684   1107  -485   -826
ATOM     750  C    SER  112 -13.262 34.157  49.149 1.000 68.28
ANISOU   750  C    SER  112 13632   4498   7812  -1855 -2077   1301
ATOM     751  O    SER  112 -12.347 34.825  48.646 1.000 95.18
ANISOU   751  O    SER  112 15991  11425   8747  -4337   -70   1985
ATOM     752  CB   SER  112 -12.493 35.069  51.349 1.000 39.31
ANISOU   752  CB   SER  112  2247   4535   8153   580   1662  -1437
ATOM     753  OG   SER  112 -11.474 34.624  52.213 1.000 37.49
ANISOU   753  OG   SER  112  7213   2453   4579   806    747  -1152
ATOM     754  N    ASP  114  -9.515 37.322  49.945 1.000 36.40
ANISOU   754  N    ASP  114  3476   2118   8237   1254   403   1484
ATOM     755  CA   ASP  114  -8.205 37.586  50.600 1.000 30.79
ANISOU   755  CA   ASP  114  3503   2856   5340   1229  1240    996
ATOM     756  C    ASP  114  -7.242 36.402  50.648 1.000 26.16
ANISOU   756  C    ASP  114  2581   2404   4955   601   1114    804
ATOM     757  O    ASP  114  -6.031 36.458  50.338 1.000 25.45
ANISOU   757  O    ASP  114  2302   2503   4866   -43    602    131
ATOM     758  CB   ASP  114  -8.595 37.874  52.075 1.000 43.68
ANISOU   758  CB   ASP  114  7509   2783   6304   1157  2727   -210
ATOM     759  CG   ASP  114  -7.391 38.386  52.835 1.000 46.96
ANISOU   759  CG   ASP  114  9259   3225   5359   2517   519    107
ATOM     760  OD1  ASP  114  -6.487 38.959  52.189 1.000 83.49
ANISOU   760  OD1  ASP  114 13724   9866   8132  -6354   650  -3056
ATOM     761  OD2  ASP  114  -7.370 38.262  54.071 1.000113.59
ANISOU   761  OD2  ASP  114 27880  10550   4730  -6984  -159  -2575
ATOM     762  N    PHE  115  -7.831 35.323  51.153 1.000 22.32
ANISOU   762  N    PHE  115  2620   2062   3799   204    954   -114
ATOM     763  CA   PHE  115  -7.115 34.026  51.183 1.000 22.69
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ANISOU  763  CA   PHE  115 2765     1909     3947     118   1093 -187
ATOM    764  C    PHE  115 -6.502  33.754  49.816 1.000 21.49
ANISOU  764  C    PHE  115 2146     2316     3702     305    559  -255
ATOM    765  O    PHE  115 -5.328  33.362  49.758 1.000 20.51
ANISOU  765  O    PHE  115 2153     2011     3627     323    488  -158
ATOM    766  CB   PHE  115 -8.096  32.928  51.638 1.000 20.76
ANISOU  766  CB   PHE  115 2369     1946     3574      -3    563  -473
ATOM    767  CG   PHE  115 -7.496  31.590  51.998 1.000 20.23
ANISOU  767  CG   PHE  115 2369     1854     3463    -155    629  -377
ATOM    768  CD1  PHE  115 -6.915  30.756  51.041 1.000 20.35
ANISOU  768  CD1  PHE  115 2572     1786     3372    -195    112  -756
ATOM    769  CD2  PHE  115 -7.474  31.152  53.309 1.000 21.11
ANISOU  769  CD2  PHE  115 2802     1932     3287    -113     17  -689
ATOM    770  CE1  PHE  115 -6.351  29.538  51.325 1.000 21.09
ANISOU  770  CE1  PHE  115 2502     1728     3784    -295    471  -538
ATOM    771  CE2  PHE  115 -6.938  29.901  53.623 1.000 27.40
ANISOU  771  CE2  PHE  115 5012     1955     3445     444     43  -572
ATOM    772  CZ   PHE  115 -6.332  29.110  52.655 1.000 24.92
ANISOU  772  CZ   PHE  115 3356     1889     4222      50   1519   221
ATOM    773  N    GLU  116 -7.301  33.768  48.757 1.000 21.64
ANISOU  773  N    GLU  116 2396     1835     3990     338    261   -13
ATOM    774  CA   GLU  116 -6.750  33.424  47.444 1.000 20.90
ANISOU  774  CA   GLU  116 2235     1965     3742     224     74  116
ATOM    775  C    GLU  116 -5.550  34.262  47.054 1.000 20.32
ANISOU  775  C    GLU  116 1978     1899     3845     439   -108  448
ATOM    776  O    GLU  116 -4.544  33.679  46.604 1.000 20.18
ANISOU  776  O    GLU  116 2209     2147     3312     424     73  139
ATOM    777  CB   GLU  116 -7.851  33.561  46.385 1.000 24.22
ANISOU  777  CB   GLU  116 2425     2638     4139    -467   -237  519
ATOM    778  CG   GLU  116 -7.339  33.331  44.980 1.000 23.27
ANISOU  778  CG   GLU  116 2425     2465     3952      -7   -494  750
ATOM    779  CD   GLU  116 -8.401  33.273  43.910 1.000 25.02
ANISOU  779  CD   GLU  116 2695     2703     4107    -510   -739 1509
ATOM    780  OE1  GLU  116 -9.617  33.306  44.207 1.000 34.83
ANISOU  780  OE1  GLU  116 2466     4606     6161    -203   -928 1566
ATOM    781  OE2  GLU  116 -8.001  33.030  42.763 1.000 40.92
ANISOU  781  OE2  GLU  116 4389     7172     3988     -24   -968  693
ATOM    782  N    ARG  117 -5.549  35.571  47.300 1.000 20.60
ANISOU  782  N    ARG  117 2299     1811     3718     382    -10   469
ATOM    783  CA   ARG  117 -4.374  36.374  46.866 1.000 22.65
ANISOU  783  CA   ARG  117 2230     1791     4586     351    107  153
ATOM    784  C    ARG  117 -3.163  35.911  47.648 1.000 21.87
ANISOU  784  C    ARG  117 2269     1865     4178     252    179   9 7
ATOM    785  O    ARG  117 -2.060  35.789  47.102 1.000 22.10
ANISOU  785  O    ARG  117 2197     2270     3931     216     41  205
ATOM    786  CB   ARG  117 -4.682  37.861  47.105 1.000 29.47
ANISOU  786  CB   ARG  117 2849     1691     6658     259   -555   -1
ATOM    787  CG   ARG  117 -3.485  38.815  47.046 1.000 40.24
ANISOU  787  CG   ARG  117 3905     2567     8818    -819  -1330  -476
ATOM    788  CD   ARG  117 -3.745  40.160  47.716 1.000 52.75
ANISOU  788  CD   ARG  117 4698     2848    12496    -595  -1653 -1669
ATOM    789  NE   ARG  117 -3.934  39.987  49.155 1.000 68.00
ANISOU  789  NE   ARG  117 8247     4719    12872     422   1842 -3441
ATOM    790  CZ   ARG  117 -3.166  40.448  50.126 1.000 78.38
ANISOU  790  CZ   ARG  117 13026    5658    11097     283    448 -2498
ATOM    791  NH1  ARG  117 -2.097  41.186  49.849 1.000 89.01
ANISOU  791  NH1  ARG  117 14218   11488     8115   -3550  -6761 3577
ATOM    792  NH2  ARG  117 -3.479  40.189  51.391 1.000 82.58
ANISOU  792  NH2  ARG  117 16575    2856    11947    2617   2551 -2095
ATOM    793  N    ILE  118 -3.334  35.759  48.954 1.000 21.70
ANISOU  793  N    ILE  118 2319     1797     4127     311    271  -314
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ATOM    794  CA  ILE  118 -2.206  35.425  49.810 1.000 20.99
ANISOU  794  CA  ILE  118 2546    1624    3805    408    294  -470
ATOM    795  C   ILE  118 -1.596  34.073  49.475 1.000 18.79
ANISOU  795  C   ILE  118 2222    1534    3384    218    573  -201
ATOM    796  O   ILE  118 -0.409  33.858  49.323 1.000 17.27
ANISOU  796  O   ILE  118 2194    1663    2707    283    351  -136
ATOM    797  CB  ILE  118 -2.588  35.542  51.293 1.000 22.62
ANISOU  797  CB  ILE  118 2702    1997    3895    276    416  -856
ATOM    798  CG1 ILE  118 -2.916  36.995  51.700 1.000 27.54
ANISOU  798  CG1 ILE  118 5077    1801    3587    503    768  -401
ATOM    799  CG2 ILE  118 -1.552  34.940  52.206 1.000 23.59
ANISOU  799  CG2 ILE  118 3084    2274    3606    183    254  -818
ATOM    800  CD1 ILE  118 -3.493  37.115  53.096 1.000 29.35
ANISOU  800  CD1 ILE  118 5212    2054    3885    558   1114  -645
ATOM    801  N   TRP  119 -2.454  33.069  49.341 1.000 17.93
ANISOU  801  N   TRP  119 2378    1605    2828    147    -80  -269
ATOM    802  CA  TRP  119 -2.035  31.688  49.103 1.000 16.57
ANISOU  802  CA  TRP  119 2126    1538    2630    152    -25   -16
ATOM    803  C   TRP  119 -1.575  31.476  47.676 1.000 16.98
ANISOU  803  C   TRP  119 2126    1723    2604    269    -91   -51
ATOM    804  O   TRP  119 -0.700  30.640  47.455 1.000 17.58
ANISOU  804  O   TRP  119 1892    1674    3113    135    181    63
ATOM    805  CB  TRP  119 -3.127  30.690  49.591 1.000 18.32
ANISOU  805  CB  TRP  119 2156    1789    3014    -34      5    -7
ATOM    806  CG  TRP  119 -2.934  30.457  51.082 1.000 18.27
ANISOU  806  CG  TRP  119 2208    1711    3025     86    349    56
ATOM    807  CD1 TRP  119 -3.354  31.273  52.103 1.000 20.36
ANISOU  807  CD1 TRP  119 2624    2029    3083    156    276  -153
ATOM    808  CD2 TRP  119 -2.213  29.383  51.683 1.000 18.61
ANISOU  808  CD2 TRP  119 2049    2055    2967    134    263   110
ATOM    809  NE1 TRP  119 -2.955  30.773  53.323 1.000 20.55
ANISOU  809  NE1 TRP  119 2471    2229    3109     92    266  -106
ATOM    810  CE2 TRP  119 -2.260  29.603  53.073 1.000 20.21
ANISOU  810  CE2 TRP  119 2529    2258    2893    180    754   297
ATOM    811  CE3 TRP  119 -1.576  28.258  51.147 1.000 18.29
ANISOU  811  CE3 TRP  119 2258    1714    2977     42    -70   -20
ATOM    812  CZ2 TRP  119 -1.636  28.728  53.981 1.000 21.97
ANISOU  812  CZ2 TRP  119 2876    2526    2945    384     51  -106
ATOM    813  CZ3 TRP  119 -0.968  27.375  52.045 1.000 19.35
ANISOU  813  CZ3 TRP  119 2576    2028    2750    187    415   299
ATOM    814  CH2 TRP  119 -1.026  27.618  53.442 1.000 21.67
ANISOU  814  CH2 TRP  119 3033    2379    2823    350    250    97
ATOM    815  N   THR  120 -2.129  32.192  46.701 1.000 16.93
ANISOU  815  N   THR  120 2023    1833    2577    122   -112    18
ATOM    816  CA  THR  120 -1.598  32.086  45.342 1.000 17.85
ANISOU  816  CA  THR  120 1915    2469    2398    222   -371  -324
ATOM    817  C   THR  120 -0.169  32.587  45.288 1.000 17.15
ANISOU  817  C   THR  120 2031    1855    2629    241   -155   192
ATOM    818  O   THR  120  0.700  31.960  44.674 1.000 18.67
ANISOU  818  O   THR  120 1996    1887    3212    389   -131   177
ATOM    819  CB  THR  120 -2.487  32.865  44.344 1.000 18.10
ANISOU  819  CB  THR  120 1951    2204    2720     28    -93   345
ATOM    820  OG1 THR  120 -3.773  32.238  44.284 1.000 20.49
ANISOU  820  OG1 THR  120 1807    2801    3179     59   -363   558
ATOM    821  CG2 THR  120 -1.919  32.803  42.933 1.000 22.46
ANISOU  821  CG2 THR  120 2438    3266    2830    475    118   705
ATOM    822  N   GLN  121  0.094  33.708  45.956 1.000 18.62
ANISOU  822  N   GLN  121 2180    1657    3237    123    -94   213
ATOM    823  CA  GLN  121  1.466  34.232  45.993 1.000 18.15
ANISOU  823  CA  GLN  121 2077    1698    3119     77     96   520
ATOM    824  C   GLN  121  2.412  33.284  46.718 1.000 17.04
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ANISOU  824  C   GLN  121 2022     1431     3019    192   234   2 2 3
ATOM    825  O   GLN  121 3.510   33.047   46.270 1.000 19.32
ANISOU  825  O   GLN  121 1894     1800     3645     93  246 1 2 9
ATOM    826  CB  GLN  121 1.490   35.579   46.756 1.000 22.90
ANISOU  826  CB  GLN  121 2520     1479     4702    327  -812 2 7 1
ATOM    827  CG  GLN  121 2.888   36.159   46.871 1.000 27.04
ANISOU  827  CG  GLN  121 2949     2062     5262   -346  -400 1 3 2
ATOM    828  CD  GLN  121 3.530   36.511   45.535 1.000 31.94
ANISOU  828  CD  GLN  121 3307     2733     6097    983  1031 9 9
ATOM    829  OE1 GLN  121 4.660   36.085   45.247 1.000 62.76
ANISOU  829  OE1 GLN  121 3009     9570    11267   1758  2366 2 0 2 9
ATOM    830  NE2 GLN  121 2.859   37.306   44.716 1.000 55.89
ANISOU  830  NE2 GLN  121 6516     7728     6993   2815  1745 3 2 4 9
ATOM    831  N   TYR  122 1.997   32.791   47.871 1.000 16.87
ANISOU  831  N   TYR  122 2389     1518     2501     71  -161  - 5 4
ATOM    832  CA  TYR  122 2.795   31.881   48.683 1.000 17.97
ANISOU  832  CA  TYR  122 2564     1600     2666    176  -224  - 5 6
ATOM    833  C   TYR  122 3.080   30.600   47.909 1.000 16.83
ANISOU  833  C   TYR  122 1870     1460     3065    -31   -57   - 9 8
ATOM    834  O   TYR  122 4.224   30.129   47.823 1.000 17.67
ANISOU  834  O   TYR  122 1891     1952     2872    189  -220 1 2 6
ATOM    835  CB  TYR  122 2.018   31.522   49.960 1.000 18.01
ANISOU  835  CB  TYR  122 2526     1821     2495      2  -325  - 5 5
ATOM    836  CG  TYR  122 2.753   30.619   50.898 1.000 17.89
ANISOU  836  CG  TYR  122 2332     1695     2769    255  -147  - 5 1
ATOM    837  CD1 TYR  122 4.058   30.901   51.323 1.000 21.71
ANISOU  837  CD1 TYR  122 2883     2101     3267   -257  -913 3 4
ATOM    838  CD2 TYR  122 2.107   29.496   51.415 1.000 21.29
ANISOU  838  CD2 TYR  122 2428     2026     3634    128  -267 4 6 8
ATOM    839  CE1 TYR  122 4.680   30.037   52.212 1.000 21.27
ANISOU  839  CE1 TYR  122 2681     2045     3356    140  -725  - 2 1 0
ATOM    840  CE2 TYR  122 2.746   28.637   52.290 1.000 24.50
ANISOU  840  CE2 TYR  122 3376     1876     4057   -292 -1163   5 0 6
ATOM    841  CZ  TYR  122 4.043   28.914   52.675 1.000 22.16
ANISOU  841  CZ  TYR  122 3161     1881     3379     95  -909  - 1 2 8
ATOM    842  OH  TYR  122 4.699   28.079   53.566 1.000 23.72
ANISOU  842  OH  TYR  122 3471     2398     3142     52 -1005  - 5 6
ATOM    843  N   PHE  123 2.074   30.023   47.253 1.000 16.21
ANISOU  843  N   PHE  123 1794     1571     2793     49   -66  - 5 4
ATOM    844  CA  PHE  123 2.347   28.843   46.397 1.000 15.71
ANISOU  844  CA  PHE  123 1622     1800     2548     34  -142   - 1 0 3
ATOM    845  C   PHE  123 3.378   29.188   45.337 1.000 15.96
ANISOU  845  C   PHE  123 1681     1304     3078     42  90 3
ATOM    846  O   PHE  123 4.276   28.375   45.037 1.000 15.47
ANISOU  846  O   PHE  123 1703     1437     2739     54  14  - 2 4
ATOM    847  CB  PHE  123 1.036   28.309   45.779 1.000 15.07
ANISOU  847  CB  PHE  123 1460     1364     2904    209  -148 1
ATOM    848  CG  PHE  123 1.241   27.104   44.879 1.000 17.41
ANISOU  848  CG  PHE  123 2090     1620     2906    -39  -179  - 2 3 8
ATOM    849  CD1 PHE  123 1.170   25.831   45.452 1.000 17.41
ANISOU  849  CD1 PHE  123 1680     1439     3494     72  -119   - 2 5 5
ATOM    850  CD2 PHE  123 1.490   27.259   43.513 1.000 18.22
ANISOU  850  CD2 PHE  123 1723     2331     2870    -96  -216  - 3 7 2
ATOM    851  CE1 PHE  123 1.419   24.740   44.636 1.000 19.15
ANISOU  851  CE1 PHE  123 2112     1766     3397    212  -540  - 5 3 6
ATOM    852  CE2 PHE  123 1.722   26.144   42.717 1.000 19.63
ANISOU  852  CE2 PHE  123 1901     2476     3083   -134  -261  - 6 3 2
ATOM    853  CZ  PHE  123 1.635   24.868   43.274 1.000 19.40
ANISOU  853  CZ  PHE  123 1525     2424     3421    385  -529  - 4 9 0
ATOM    854  N   ASP  124 3.164   30.304   44.636 1.000 16.86
ANISOU  854  N   ASP  124 1947     1466     2992    -23  -110 1 2 4
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ATOM    855  CA  ASP  124 4.060   30.640  43.544 1.000 17.82
ANISOU  855  CA  ASP  124 2103    1747    2921    405   -24  3 1 4
ATOM    856  C   ASP  124 5.490   30.733  44.024 1.000 17.52
ANISOU  856  C   ASP  124 1999    1439    3219    181    94 8 9
ATOM    857  O   ASP  124 6.402   30.324  43.317 1.000 17.18
ANISOU  857  O   ASP  124 2086    1427    3015     34  181 1 7 7
ATOM    858  CB  AASP 124 3.639   31.997  42.942 0.534 21.77
ANISOU  858  CB  AASP 124 3475    2089    2706    642  -372 5 9 7
ATOM    859  CG  AASP 124 4.381   32.304  41.659 0.534 19.28
ANISOU  859  CG  AASP 124 2376    1982    2967    173  -553 4 9 5
ATOM    860  OD1 AASP 124 4.223   31.538  40.678 0.534 21.03
ANISOU  860  OD1 AASP 124 2189    2636    3164    -28    76 2 1
ATOM    861  OD2 AASP 124 5.068   33.348  41.639 0.534 24.96
ANISOU  861  OD2 AASP 124 3681    2052    3752   -296 -1067 8 8 9
ATOM    862  CB  BASP 124 3.632   31.975  42.908 0.466 19.67
ANISOU  862  CB  BASP 124 2559    1993    2923   1003   673  4 4 6
ATOM    863  CG  BASP 124 2.368   31.849  42.089 0.466 22.78
ANISOU  863  CG  BASP 124 3552    3217    1889    872   177  1 1 7 5
ATOM    864  OD1 BASP 124 2.021   30.781  41.545 0.466 27.78
ANISOU  864  OD1 BASP 124 2138    3932    4483    100   503  3 4 7
ATOM    865  OD2 BASP 124 1.703   32.893  41.902 0.466 29.73
ANISOU  865  OD2 BASP 124 3845    3804    3646   1239  -312 1 6 4 4
ATOM    866  N   ARG  125 5.669   31.416  45.153 1.000 16.65
ANISOU  866  N   ARG  125 1942    1350    3032    276   139  2 7 6
ATOM    867  CA  ARG  125 7.038   31.528  45.646 1.000 17.58
ANISOU  867  CA  ARG  125 1918    1819    2944     98  177 2 4 1
ATOM    868  C   ARG  125 7.662   30.188  45.992 1.000 17.38
ANISOU  868  C   ARG  125 1544    1777    3282    -42    40 2 7 3
ATOM    869  O   ARG  125 8.841   29.942  45.754 1.000 18.26
ANISOU  869  O   ARG  125 1639    1669    3631    -97    91 - 2 3 3
ATOM    870  CB  ARG  125 7.062   32.468  46.851 1.000 20.45
ANISOU  870  CB  ARG  125 2219    2162    3387   -244   450   - 2 7 4
ATOM    871  CG  ARG  125 6.860   33.916  46.344 1.000 28.23
ANISOU  871  CG  ARG  125 3178    2007    5542    147   666   - 2 2 2
ATOM    872  CD  ARG  125 6.693   34.891  47.477 1.000 31.76
ANISOU  872  CD  ARG  125 3065    2279    6725   -628  1455 - 9 9 3
ATOM    873  NE  ARG  125 6.496   36.221  46.932 1.000 40.81
ANISOU  873  NE  ARG  125 3332    2095   10080   -169  1790 - 6 9 4
ATOM    874  CZ  ARG  125 5.970   37.229  47.628 1.000 43.42
ANISOU  874  CZ  ARG  125 4531    2891    9076    839  2072 - 1 8 8
ATOM    875  NH1 ARG  125 5.551   37.025  48.866 1.000 38.62
ANISOU  875  NH1 ARG  125 3999    2858    7816   -858    61 - 7 0 0
ATOM    876  NH2 ARG  125 5.858   38.382  47.006 1.000 42.11
ANISOU  876  NH2 ARG  125 5319    2652    8030    908  1627 - 6 8 1
ATOM    877  N   GLN  126 6.884   29.282  46.557 1.000 15.28
ANISOU  877  N   GLN  126 1876    1527    2404    -70    13 - 6 0
ATOM    878  CA  GLN  126 7.376   27.929  46.853 1.000 15.37
ANISOU  878  CA  GLN  126 1726    1625    2488    -54  -312 2 0
ATOM    879  C   GLN  126 7.649   27.150  45.578 1.000 14.21
ANISOU  879  C   GLN  126 1643    1268    2488    -75  -398 7 1
ATOM    880  O   GLN  126 8.682   26.462  45.496 1.000 15.36
ANISOU  880  O   GLN  126 1531    1554    2753    -37  -316 5 3
ATOM    881  CB  GLN  126 6.356   27.158  47.702 1.000 17.40
ANISOU  881  CB  GLN  126 2034    1313    3264    158   293  4 3
ATOM    882  CG  GLN  126 6.336   27.634  49.150 1.000 26.14
ANISOU  882  CG  GLN  126 4503    1690    3739    431  1908 - 7 3 2
ATOM    883  CD  GLN  126 5.208   26.998  49.891 1.000 21.95
ANISOU  883  CD  GLN  126 2957    2670    2713      0  -123 1 0 2
ATOM    884  OE1 GLN  126 4.051   27.372  49.730 1.000 42.52
ANISOU  884  OE1 GLN  126 2994    5747    7416    -62 -1272 3 1 4 7
ATOM    885  NE2 GLN  126 5.524   26.003  50.691 1.000 28.32
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ANISOU  885  NE2 GLN   126 2867      3971      3922       -184  -780 1311
ATOM    886  N   TYR   127 6.797    27.287    44.574 1.000 14.52
ANISOU  886  N   TYR   127 1629      1438      2448        -41  -373 - 36
ATOM    887  CA  TYR   127 7.039    26.554    43.317 1.000 13.93
ANISOU  887  CA  TYR   127 1563      1455      2277       -136  -234 150
ATOM    888  C   TYR   127 8.289    27.091    42.624 1.000 14.54
ANISOU  888  C   TYR   127 1461      1318      2745         24  -195 190
ATOM    889  O   TYR   127 9.133    26.345    42.140 1.000 14.39
ANISOU  889  O   TYR   127 1611      1580      2277         34  -252   9
ATOM    890  CB  TYR   127 5.801    26.676    42.435 1.000 14.00
ANISOU  890  CB  TYR   127 1510      1549      2258         29  -180 - 70
ATOM    891  CG  TYR   127 5.752    25.795    41.202 1.000 12.33
ANISOU  891  CG  TYR   127 1315      1037      2334        -34  -187 4 5
ATOM    892  CD1 TYR   127 6.483    24.626    41.024 1.000 14.05
ANISOU  892  CD1 TYR   127 1810      1158      2371          7   -84 - 8
ATOM    893  CD2 TYR   127 4.837    26.086    40.206 1.000 15.71
ANISOU  893  CD2 TYR   127 1936      1548      2484         55  -513 2 1
ATOM    894  CE1 TYR   127 6.382    23.829    39.899 1.000 13.10
ANISOU  894  CE1 TYR   127 1450       999      2529       -101  -227 - 62
ATOM    895  CE2 TYR   127 4.661    25.322    39.071 1.000 15.07
ANISOU  895  CE2 TYR   127 1928      1620      2177        158  -342 197
ATOM    896  CZ  TYR   127 5.440    24.179    38.934 1.000 13.71
ANISOU  896  CZ  TYR   127 1617      1348      2245       -146  -106 246
ATOM    897  OH  TYR   127 5.337    23.386    37.811 1.000 15.04
ANISOU  897  OH  TYR   127 1682      1755      2279        -87   -60 5 3
ATOM    898  N   THR   128 8.467    28.412    42.616 1.000 14.69
ANISOU  898  N   THR   128 1813      1324      2446       -154  -217 268
ATOM    899  CA  THR   128 9.673    28.984    42.011 1.000 14.67
ANISOU  899  CA  THR   128 1867      1469      2238        -98   -32 195
ATOM    900  C   THR   128 10.921   28.552    42.736 1.000 14.68
ANISOU  900  C   THR   128 1794      1318      2466         59  -123 - 285
ATOM    901  O   THR   128 11.900   28.166    42.062 1.000 15.45
ANISOU  901  O   THR   128 1715      1487      2667       -259   153 7 1
ATOM    902  CB  THR   128 9.572    30.544    42.069 1.000 16.02
ANISOU  902  CB  THR   128 2043      1348      2695        -79    59 479
ATOM    903  OG1 THR   128 8.519    30.849    41.162 1.000 19.14
ANISOU  903  OG1 THR   128 2226      2038      3008        195   -23 5 45
ATOM    904  CG2 THR   128 10.835   31.187    41.582 1.000 19.03
ANISOU  904  CG2 THR   128 2107      1329      3793        125   311 6 18
ATOM    905  N   ALA   129 10.933   28.564    44.085 1.000 14.21
ANISOU  905  N   ALA   129 1708      1266      2424       -137  -256 -181
ATOM    906  CA  ALA   129 12.108   28.110    44.836 1.000 15.08
ANISOU  906  CA  ALA   129 1670      1435      2624       -118  -210 -225
ATOM    907  C   ALA   129 12.389   26.643    44.562 1.000 14.37
ANISOU  907  C   ALA   129 1706      1299      2457       -159  -203 157
ATOM    908  O   ALA   129 13.552   26.238    44.445 1.000 14.10
ANISOU  908  O   ALA   129 1758      1464      2137         -5  -244 - 148
ATOM    909  CB  ALA   129 11.887   28.313    46.313 1.000 17.08
ANISOU  909  CB  ALA   129 2132      1851      2506       -183  -514 -239
ATOM    910  N   SER   130 11.343   25.819    44.553 1.000 14.18
ANISOU  910  N   SER   130 1884      1237      2267       -224  -257 173
ATOM    911  CA  SER   130 11.487   24.375    44.351 1.000 15.44
ANISOU  911  CA  SER   130 1840      1219      2807       -115  -135 - 7
ATOM    912  C   SER   130 12.072   24.114    42.965 1.000 14.45
ANISOU  912  C   SER   130 1345      1481      2665         78  -796 -209
ATOM    913  O   SER   130 13.037   23.329    42.807 1.000 14.43
ANISOU  913  O   SER   130 1327      1382      2773        -74  -246 172
ATOM    914  CB  SER   130 10.120   23.677    44.663 1.000 17.54
ANISOU  914  CB  SER   130 1555      1225      3884       -379  -647 126
ATOM    915  OG  SER   130 9.268    23.888    43.558 1.000 27.32
ANISOU  915  OG  SER   130 2321      3168      4893         11 -1207 865
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ATOM    916  N   ARG  131 11.555  24.772  41.909 1.000 14.47
ANISOU  916  N   ARG  131 1421    1448    2628    161  -384 -166
ATOM    917  CA  ARG  131 12.163  24.598  40.592 1.000 14.91
ANISOU  917  CA  ARG  131 1689    1452    2525     -4  -526 -341
ATOM    918  C   ARG  131 13.605  25.079  40.566 1.000 14.05
ANISOU  918  C   ARG  131 1772    1435    2132    -72  -381 -173
ATOM    919  O   ARG  131 14.448  24.438  39.912 1.000 15.14
ANISOU  919  O   ARG  131 1829    1658    2267   -109  -170 -230
ATOM    920  CB  ARG  131 11.349  25.316  39.514 1.000 15.77
ANISOU  920  CB  ARG  131 1720    1613    2660    -54  -493  -94
ATOM    921  CG  ARG  131  9.970  24.737  39.251 1.000 16.08
ANISOU  921  CG  ARG  131 1703    1695    2711    -13  -647 -141
ATOM    922  CD  ARG  131  9.326  25.390  38.017 1.000 26.56
ANISOU  922  CD  ARG  131 3589    2689    3813  -1037 -2156  745
ATOM    923  NE  ARG  131  9.327  26.831  37.918 1.000 25.91
ANISOU  923  NE  ARG  131 2856    2814    4174   -979 -1682 1413
ATOM    924  CZ  ARG  131  8.472  27.716  38.413 1.000 31.86
ANISOU  924  CZ  ARG  131 3546    2861    5697   -254 -1094 2201
ATOM    925  NH1 ARG  131  7.467  27.244  39.138 1.000 31.34
ANISOU  925  NH1 ARG  131 5127    3636    3144  -1474  -458 -115
ATOM    926  NH2 ARG  131  8.633  29.032  38.235 1.000 40.12
ANISOU  926  NH2 ARG  131 3500    2831    8912   -582 -1620 1802
ATOM    927  N   ALA  132 13.893  26.186  41.236 1.000 13.42
ANISOU  927  N   ALA  132 1683    1385    2033    -85  -652  -24
ATOM    928  CA  ALA  132 15.246  26.751  41.128 1.000 13.38
ANISOU  928  CA  ALA  132 1617    1443    2022    -16  -499  -79
ATOM    929  C   ALA  132 16.225  25.808  41.837 1.000 13.37
ANISOU  929  C   ALA  132 1398    1365    2316    -93  -253  154
ATOM    930  O   ALA  132 17.306  25.586  41.328 1.000 14.43
ANISOU  930  O   ALA  132 1459    1772    2251    -91  -240  106
ATOM    931  CB  ALA  132 15.275  28.084  41.859 1.000 16.52
ANISOU  931  CB  ALA  132 2019    1243    3014   -199  -366 -236
ATOM    932  N   VAL  133 15.893  25.248  42.996 1.000 13.62
ANISOU  932  N   VAL  133 1522    1515    2139    -63  -362   86
ATOM    933  CA  VAL  133 16.839  24.363  43.689 1.000 14.86
ANISOU  933  CA  VAL  133 1902    1566    2179    120  -491  -27
ATOM    934  C   VAL  133 16.923  23.073  42.890 1.000 15.04
ANISOU  934  C   VAL  133 1390    1633    2690     -9  -220 -218
ATOM    935  O   VAL  133 18.036  22.538  42.773 1.000 15.49
ANISOU  935  O   VAL  133 1442    1814    2630     63  -193  -99
ATOM    936  CB  VAL  133 16.545  24.170  45.187 1.000 14.61
ANISOU  936  CB  VAL  133 1528    1789    2234    -45  -391  210
ATOM    937  CG1 VAL  133 15.362  23.267  45.453 1.000 16.78
ANISOU  937  CG1 VAL  133 1544    2123    2708   -249  -437  -81
ATOM    938  CG2 VAL  133 17.766  23.650  45.950 1.000 16.51
ANISOU  938  CG2 VAL  133 1769    1942    2561    -61  -831   64
ATOM    939  N   ALA  134 15.840  22.583  42.270 1.000 13.73
ANISOU  939  N   ALA  134 1605    1451    2160    -75  -397  185
ATOM    940  CA  ALA  134 15.951  21.369  41.451 1.000 14.21
ANISOU  940  CA  ALA  134 1505    1796    2100    116  -570  -33
ATOM    941  C   ALA  134 16.838  21.618  40.246 1.000 15.07
ANISOU  941  C   ALA  134 1766    1511    2450     43  -292   17
ATOM    942  O   ALA  134 17.600  20.750  39.800 1.000 14.36
ANISOU  942  O   ALA  134 1555    1567    2333    -60  -286   52
ATOM    943  CB  ALA  134 14.535  20.925  41.032 1.000 16.97
ANISOU  943  CB  ALA  134 1472    1943    3031     12  -470 -299
ATOM    944  N   ARG  135 16.752  22.808  39.631 1.000 15.48
ANISOU  944  N   ARG  135 1848    1600    2433     14  -341   -2
ATOM    945  CA  ARG  135 17.618  23.153  38.508 1.000 16.07
ANISOU  945  CA  ARG  135 2139    1230    2735   -138  -189   35
ATOM    946  C   ARG  135 19.082  23.057  38.955 1.000 15.70
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ANISOU  946  C   ARG 135 2059    1370    2535   -134   27 1 2 1
ATOM    947  O   ARG 135 19.928  22.604  38.176 1.000 18.07
ANISOU  947  O   ARG 135 2317    2014    2534    108   256  2 7 6
ATOM    948  CB  ARG 135 17.277  24.586  38.096 1.000 21.96
ANISOU  948  CB  ARG 135 3936    1640    2767     -4 -1480 6 1 4
ATOM    949  CG  ARG 135 17.571  24.989  36.689 1.000 27.53
ANISOU  949  CG  ARG 135 5112    2482    2866    816  -610 5 9 5
ATOM    950  CD  ARG 135 16.930  26.332  36.393 1.000 23.27
ANISOU  950  CD  ARG 135 3548    2428    2865    148   61 1 3 7 1
ATOM    951  NE  ARG 135 15.551  26.309  35.928 1.000 22.68
ANISOU  951  NE  ARG 135 3488    1575    3556   -116   167  2 9 7
ATOM    952  CZ  ARG 135 14.520  26.858  36.562 1.000 25.90
ANISOU  952  CZ  ARG 135 3801    2165    3874    921  -506 -1 7 9
ATOM    953  NH1 ARG 135 14.708  27.515  37.702 1.000 23.50
ANISOU  953  NH1 ARG 135 3582    2378    2969     94  137 5 3 2
ATOM    954  NH2 ARG 135 13.287  26.758  36.035 1.000 24.30
ANISOU  954  NH2 ARG 135 3520    2441    3272   -101   72 5 8 2
ATOM    955  N   GLU 136 19.403  23.533  40.149 1.000 15.76
ANISOU  955  N   GLU 136 1897    1696    2396   -178   17 3 1 8
ATOM    956  CA  GLU 136 20.752  23.431  40.694 1.000 15.16
ANISOU  956  CA  GLU 136 1687    1770    2302    -97   279  1 4 0
ATOM    957  C   GLU 136 21.186  22.001  40.978 1.000 16.74
ANISOU  957  C   GLU 136 1535    1704    3122   -148  -172 - 7 2
ATOM    958  O   GLU 136 22.350  21.637  40.701 1.000 17.42
ANISOU  958  O   GLU 136 1710    1908    2999      7   30 9 2
ATOM    959  CB  GLU 136 20.957  24.284  41.962 1.000 16.64
ANISOU  959  CB  GLU 136 2048    1785    2487     53   11 - 1 6
ATOM    960  CG  GLU 136 20.762  25.772  41.718 1.000 17.80
ANISOU  960  CG  GLU 136 2036    1714    3014   -286  -169 1 1 0
ATOM    961  CD  GLU 136 21.534  26.269  40.513 1.000 20.92
ANISOU  961  CD  GLU 136 2174    2273    3503   -343   70 4 6 9
ATOM    962  OE1 GLU 136 22.742  25.987  40.454 1.000 24.97
ANISOU  962  OE1 GLU 136 2116    2434    4938   -494   531  2 1 9
ATOM    963  OE2 GLU 136 21.022  27.037  39.672 1.000 24.77
ANISOU  963  OE2 GLU 136 2975    2618    3817   -708  -133 1 0 2 9
ATOM    964  N   VAL 137 20.262  21.172  41.450 1.000 15.34
ANISOU  964  N   VAL 137 1681    1696    2453   -108  -287 1 1 3
ATOM    965  CA  VAL 137 20.568  19.750  41.647 1.000 15.92
ANISOU  965  CA  VAL 137 1755    1802    2493     83   -4 2 1 0
ATOM    966  C   VAL 137 20.926  19.086  40.326 1.000 15.86
ANISOU  966  C   VAL 137 1604    1869    2555    -38   -35  6 6
ATOM    967  O   VAL 137 21.905  18.308  40.174 1.000 16.70
ANISOU  967  O   VAL 137 1617    2118    2609     72 -151  - 9 0
ATOM    968  CB  VAL 137 19.358  18.990  42.283 1.000 15.35
ANISOU  968  CB  VAL 137 1729    1663    2440      8  -29 5
ATOM    969  CG1 VAL 137 19.607  17.478  42.176 1.000 16.93
ANISOU  969  CG1 VAL 137 1521    1689    3223    160  -345 9 6
ATOM    970  CG2 VAL 137 19.144  19.420  43.724 1.000 15.43
ANISOU  970  CG2 VAL 137 1529    2090    2245    -53  -277 1 8 5
ATOM    971  N   LEU 138 20.149  19.407  39.284 1.000 15.52
ANISOU  971  N   LEU 138 1625    1735    2535   -105  -61  1 0 9
ATOM    972  CA  LEU 138 20.378  18.881  37.936 1.000 15.74
ANISOU  972  CA  LEU 138 1576    1862    2543    -71   15 5 1
ATOM    973  C   LEU 138 21.721  19.396  37.406 1.000 17.42
ANISOU  973  C   LEU 138 1588    2119    2912    -87   162  - 4 5
ATOM    974  O   LEU 138 22.503  18.609  36.846 1.000 19.13
ANISOU  974  O   LEU 138 1878    2406    2985    186   317  6 2
ATOM    975  CB  LEU 138 19.211  19.248  36.996 1.000 14.70
ANISOU  975  CB  LEU 138 1592    1642    2349    -50   141  1 9 0
ATOM    976  CG  LEU 138 17.883  18.541  37.375 1.000 14.38
ANISOU  976  CG  LEU 138 1657    1409    2399    -44   -4 2 8 8
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ATOM    977 CD1 LEU  138 16.774  19.122  36.491 1.000 16.13
ANISOU  977 CD1 LEU  138 1743    1848    2539    128  -218 1 6 8
ATOM    978 CD2 LEU  138 17.975  17.027  37.156 1.000 17.48
ANISOU  978 CD2 LEU  138 2185    1435    3021   -107  -480 2 8 7
ATOM    979 N   ARG  139 21.963  20.708  37.548 1.000 17.44
ANISOU  979 N   ARG  139 1797    2157    2674   -319   238 1 9 2
ATOM    980 CA  ARG  139 23.189  21.319  36.996 1.000 19.06
ANISOU  980 CA  ARG  139 2043    2462    2735   -366   482 3 7 6
ATOM    981 C   ARG  139 24.419  20.734  37.685 1.000 19.72
ANISOU  981 C   ARG  139 1797    2600    3097   -518   482 3 7 6
ATOM    982 O   ARG  139 25.461  20.432  37.094 1.000 20.70
ANISOU  982 O   ARG  139 2046    2469    3350   -288   607 1 9 5
ATOM    983 CB  ARG  139 23.152  22.850  37.101 1.000 24.54
ANISOU  983 CB  ARG  139 2525    2403    4396   -402   951 6 9 0
ATOM    984 CG  ARG  139 23.886  23.665  36.073 1.000 36.05
ANISOU  984 CG  ARG  139 6517    2967    4212  -2176  1609 1 4 0
ATOM    985 CD  ARG  139 23.852  25.148  36.443 1.000 44.95
ANISOU  985 CD  ARG  139 7459    1902    7716   -242 -1324 1 9 3 0
ATOM    986 NE  ARG  139 22.525  25.727  36.547 1.000 43.27
ANISOU  986 NE  ARG  139 6637    3846    5959   -828 -2173 - 6 9 8
ATOM    987 CZ  ARG  139 21.821  26.330  35.605 1.000 41.34
ANISOU  987 CZ  ARG  139 5939    4102    5666    497   645 1 1 4 0
ATOM    988 NH1 ARG  139 22.308  26.436  34.376 1.000 44.01
ANISOU  988 NH1 ARG  139 6564    4146    6011    550  1393 3 3 6
ATOM    989 NH2 ARG  139 20.614  26.837  35.833 1.000 45.75
ANISOU  989 NH2 ARG  139 6162    4618    6602    537  1938 2 4 0 5
ATOM    990 N   ALA  140 24.357  20.566  39.009 1.000 18.77
ANISOU  990 N   ALA  140 1742    2387    3003   -255   145 6 9
ATOM    991 CA  ALA  140 25.532  20.169  39.773 1.000 19.53
ANISOU  991 CA  ALA  140 1583    2641    3197    -28    38 - 6 6 8
ATOM    992 C   ALA  140 25.932  18.732  39.490 1.000 18.96
ANISOU  992 C   ALA  140 2018    2342    2843    -67    76 - 1 0 3
ATOM    993 O   ALA  140 27.109  18.335  39.626 1.000 21.36
ANISOU  993 O   ALA  140 1900    2436    3778     -2   472 - 8 0
ATOM    994 CB  ALA  140 25.273  20.345  41.275 1.000 19.74
ANISOU  994 CB  ALA  140 1824    2592    3084     35 0   - 3 6 0
ATOM    995 N   THR  141 24.958  17.943  39.062 1.000 20.32
ANISOU  995 N   THR  141 2014    2209    3498   -115   305 - 1 3 8
ATOM    996 CA  THR  141 25.151  16.530  38.717 1.000 17.15
ANISOU  996 CA  THR  141 1870    2039    2609     61 51 2 1 8
ATOM    997 C   THR  141 25.269  16.278  37.208 1.000 17.44
ANISOU  997 C   THR  141 1492    2443    2693     21 278 1 9 9
ATOM    998 O   THR  141 25.343  15.106  36.792 1.000 19.24
ANISOU  998 O   THR  141 1871    2623    2814     63 579 - 6 3
ATOM    999 CB  THR  141 24.048  15.629  39.290 1.000 16.79
ANISOU  999 CB  THR  141 1708    2261    2410     83 164 3 1
ATOM   1000 OG1 THR  141 22.788  16.012  38.710 1.000 17.18
ANISOU 1000 OG1 THR  141 1894    2235    2399   -101   -53 5 1 8
ATOM   1001 CG2 THR  141 23.982  15.734  40.807 1.000 17.83
ANISOU 1001 CG2 THR  141 1521    2878    2377    164   -43 2 0
ATOM   1002 N   GLY  142 25.361  17.301  36.381 1.000 19.69
ANISOU 1002 N   GLY  142 2091    2789    2603   -708   302 2 9 7
ATOM   1003 CA  GLY  142 25.517  17.123  34.923 1.000 19.08
ANISOU 1003 CA  GLY  142 1878    2819    2551    128  -163 2 5 5
ATOM   1004 C   GLY  142 24.284  16.441  34.313 1.000 18.75
ANISOU 1004 C   GLY  142 1972    2410    2744      0   252 - 1 1 7
ATOM   1005 O   GLY  142 24.443  15.755  33.315 1.000 22.41
ANISOU 1005 O   GLY  142 2432    2681    3403   -161   571 - 6 8 0
ATOM   1006 N   THR  143 23.093  16.650  34.854 1.000 17.28
ANISOU 1006 N   THR  143 1895    2002    2667     67 300 2 4 4
ATOM   1007 CA  THR  143 21.909  15.932  34.393 1.000 16.88
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ANISOU 1007 CA   THR  143 1953      2006      2456    164   332   6  6
ATOM   1008 C    THR  143 20.998  16.660  33.432 1.000 17.02
ANISOU 1008 C    THR  143 2149      1795      2521     82 196 1 17
ATOM   1009 O    THR  143 20.457  17.713  33.764 1.000 20.30
ANISOU 1009 O    THR  143 2795      1815      3103    344   12 - 28
ATOM   1010 CB   THR  143 21.085  15.490  35.623 1.000 16.40
ANISOU 1010 CB   THR  143 1755      2329      2148    -37   95 - 44
ATOM   1011 OG1  THR  143 21.922  14.692  36.479 1.000 17.82
ANISOU 1011 OG1  THR  143 2009      2075      2688   -109   39 337
ATOM   1012 CG2  THR  143 19.887  14.621  35.270 1.000 19.51
ANISOU 1012 CG2  THR  143 1957      2290      3167   -192  -94   1 0 0
ATOM   1013 N    GLU  144 20.742  16.070  32.248 1.000 18.79
ANISOU 1013 N    GLU  144 2138      2203      2800     47  12 -121
ATOM   1014 CA   GLU  144 19.729  16.573  31.334 1.000 20.13
ANISOU 1014 CA   GLU  144 2202      2696      2750   -292  -41   3 16
ATOM   1015 C    GLU  144 18.637  15.506  31.254 1.000 19.18
ANISOU 1015 C    GLU  144 2255      2614      2418   -292  230  -131
ATOM   1016 O    GLU  144 18.827  14.438  30.665 1.000 21.46
ANISOU 1016 O    GLU  144 2268      2442      3446     19 649 - 88
ATOM   1017 CB  AGLU  144 20.250  17.061  30.006 0.753 29.50
ANISOU 1017 CB  AGLU  144 3376      4266      3566   -855  206  1 5 0 1
ATOM   1018 CG  AGLU  144 20.195  18.567  29.741 0.753 36.54
ANISOU 1018 CG  AGLU  144 6059      3913      3913  -1728 1769 7 9 5
ATOM   1019 CD  AGLU  144 21.242  19.411  30.426 0.753 33.13
ANISOU 1019 CD  AGLU  144 4189      3432      4966    104  744   8 84
ATOM   1020 OE1 AGLU  144 21.079  19.690  31.641 0.753 51.91
ANISOU 1020 OE1 AGLU  144 3684     11101      4940   -868 -202 -590
ATOM   1021 OE2 AGLU  144 22.207  19.910  29.807 0.753 50.79
ANISOU 1021 OE2 AGLU  144 7949      3695      7653  -3071 3099 -1249
ATOM   1022 CB  BGLU  144 20.372  16.724  29.951 0.247 18.36
ANISOU 1022 CB  BGLU  144 868 3091      3016    334   16 2 62
ATOM   1023 CG  BGLU  144 21.214  17.988  29.779 0.247 23.54
ANISOU 1023 CG  BGLU  144 1301      3586      4056    -38  595  5 5 8
ATOM   1024 CD  BGLU  144 21.150  18.468  28.336 0.247 33.24
ANISOU 1024 CD  BGLU  144 3589      3975      5064    438  -20  2 0 3 1
ATOM   1025 OE1 BGLU  144 20.417  17.818  27.557 0.247 28.68
ANISOU 1025 OE1 BGLU  144 3222      4813      2861    389 1729 1280
ATOM   1026 OE2 BGLU  144 21.814  19.464  27.990 0.247 35.35
ANISOU 1026 OE2 BGLU  144 3176      5148      5108     35 1752   1516
ATOM   1027 N    PRO  145 17.508  15.724  31.911 1.000 17.11
ANISOU 1027 N    PRO  145 2132      1825      2543     68 62 1 58
ATOM   1028 CA   PRO  145 16.396  14.781  31.846 1.000 17.41
ANISOU 1028 CA   PRO  145 2290      1942      2384    -73  400   1 2
ATOM   1029 C    PRO  145 15.966  14.546  30.406 1.000 17.94
ANISOU 1029 C    PRO  145 2386      1955      2475   -116  292  -104
ATOM   1030 O    PRO  145 16.068  15.439  29.557 1.000 18.26
ANISOU 1030 O    PRO  145 2271      2196      2472   -272  170   4 5
ATOM   1031 CB   PRO  145 15.250  15.493  32.594 1.000 17.07
ANISOU 1031 CB   PRO  145 2181      1771      2534     35 133 -143
ATOM   1032 CG   PRO  145 15.950  16.504  33.464 1.000 17.11
ANISOU 1032 CG   PRO  145 2341      1841      2319     23 -49 - 2 4
ATOM   1033 CD   PRO  145 17.131  16.977  32.649 1.000 17.54
ANISOU 1033 CD   PRO  145 2178      1601      2884    178  -88  3 0 3
ATOM   1034 N    ASP  146 15.490  13.346  30.104 1.000 18.15
ANISOU 1034 N    ASP  146 2140      1965      2790    -60  321  -152
ATOM   1035 CA   ASP  146 14.909  13.121  28.775 1.000 18.43
ANISOU 1035 CA   ASP  146 2487      1664      2853   -329  310  -156
ATOM   1036 C    ASP  146 13.809  14.154  28.566 1.000 18.07
ANISOU 1036 C    ASP  146 2824      1979      2064    -31  208  -309
ATOM   1037 O    ASP  146 12.959  14.333  29.422 1.000 18.29
ANISOU 1037 O    ASP  146 2491      2173      2287   -168  203  -230
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ATOM    1038 CB   ASP   146 14.221  11.735  28.717 1.000 23.50
ANISOU  1038 CB   ASP   146 3489    1671    3769    -653  908  -665
ATOM    1039 CG   ASP   146 13.636  11.508  27.334 1.000 34.15
ANISOU  1039 CG   ASP   146 4070    4205    4700    -1004 361  -2386
ATOM    1040 OD1  ASP   146 12.393  11.521  27.138 1.000 44.73
ANISOU  1040 OD1  ASP   146 3971    9175    3849    -2156 683  378
ATOM    1041 OD2  ASP   146 14.421  11.229  26.397 1.000 44.78
ANISOU  1041 OD2  ASP   146 4342    8626    4046    -813  289  -2326
ATOM    1042 N    GLY   147 13.901  14.854  27.450 1.000 19.28
ANISOU  1042 N    GLY   147 2622    2331    2374    -635  -72  113
ATOM    1043 CA   GLY   147 12.916  15.878  27.171 1.000 18.58
ANISOU  1043 CA   GLY   147 2463    2607    1991    -550  -234 -36
ATOM    1044 C    GLY   147 13.355  17.262  27.590 1.000 18.25
ANISOU  1044 C    GLY   147 2511    2432    1993    -335  -138 64
ATOM    1045 O    GLY   147 12.586  18.183  27.289 1.000 20.74
ANISOU  1045 O    GLY   147 2469    2739    2673    -182  -144 205
ATOM    1046 N    GLY   148 14.494  17.357  28.286 1.000 17.38
ANISOU  1046 N    GLY   148 2237    2174    2191    -462  -42  -90
ATOM    1047 CA   GLY   148 15.027  18.658  28.672 1.000 16.72
ANISOU  1047 CA   GLY   148 2308    1789    2255    39    -82  -77
ATOM    1048 C    GLY   148 14.653  19.076  30.085 1.000 13.94
ANISOU  1048 C    GLY   148 1517    1645    2135    77    -201 117
ATOM    1049 O    GLY   148 13.637  18.634  30.694 1.000 16.29
ANISOU  1049 O    GLY   148 1839    1863    2487    -151  -77  285
ATOM    1050 N    VAL   149 15.431  20.003  30.641 1.000 14.93
ANISOU  1050 N    VAL   149 1624    1780    2269    1     -193 -14
ATOM    1051 CA   VAL   149 15.275  20.509  32.017 1.000 14.16
ANISOU  1051 CA   VAL   149 1647    1511    2222    92    -195 86
ATOM    1052 C    VAL   149 13.958  21.218  32.235 1.000 14.37
ANISOU  1052 C    VAL   149 1735    1044    2682    -39   83   188
ATOM    1053 O    VAL   149 13.203  20.970  33.163 1.000 14.63
ANISOU  1053 O    VAL   149 1653    1517    2390    -160  -40  107
ATOM    1054 CB   VAL   149 16.439  21.410  32.417 1.000 14.02
ANISOU  1054 CB   VAL   149 1745    1530    2052    -112  -57  270
ATOM    1055 CG1  VAL   149 16.228  22.101  33.752 1.000 16.48
ANISOU  1055 CG1  VAL   149 2360    1709    2193    -153  -305 87
ATOM    1056 CG2  VAL   149 17.733  20.614  32.482 1.000 17.85
ANISOU  1056 CG2  VAL   149 1618    1937    3226    -59   -52  441
ATOM    1057 N    GLU   150 13.634  22.199  31.371 1.000 15.26
ANISOU  1057 N    GLU   150 1759    1328    2711    186   36   267
ATOM    1058 CA   GLU   150 12.471  23.028  31.687 1.000 14.91
ANISOU  1058 CA   GLU   150 1591    1434    2640    93    13   415
ATOM    1059 C    GLU   150 11.182  22.237  31.553 1.000 16.66
ANISOU  1059 C    GLU   150 1680    1980    2670    -197  113  199
ATOM    1060 O    GLU   150 10.259  22.408  32.379 1.000 15.89
ANISOU  1060 O    GLU   150 1697    1761    2578    29    79   580
ATOM    1061 CB   GLU   150 12.531  24.305  30.874 1.000 17.07
ANISOU  1061 CB   GLU   150 1925    1337    3223    254   189  513
ATOM    1062 CG   GLU   150 13.761  25.167  31.220 1.000 19.00
ANISOU  1062 CG   GLU   150 2483    1212    3523    -65   -95  465
ATOM    1063 CD   GLU   150 13.810  25.624  32.658 1.000 20.32
ANISOU  1063 CD   GLU   150 2444    1746    3532    -130  -24  454
ATOM    1064 OE1  GLU   150 12.781  25.749  33.377 1.000 20.88
ANISOU  1064 OE1  GLU   150 2558    1728    3648    29    58   396
ATOM    1065 OE2  GLU   150 14.913  25.946  33.161 1.000 21.77
ANISOU  1065 OE2  GLU   150 2549    2030    3693    -165  -202 273
ATOM    1066 N    ALA   151 11.050  21.288  30.603 1.000 14.98
ANISOU  1066 N    ALA   151 1649    1710    2334    37    -307 551
ATOM    1067 CA   ALA   151 9.834   20.475  30.543 1.000 15.79
ANISOU  1067 CA   ALA   151 1820    2045    2136    -173  -198 408
ATOM    1068 C    ALA   151 9.748   19.531  31.724 1.000 15.38
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ANISOU 1068 C   ALA 151 1674    1953    2216    165    181    4 4 2
ATOM   1069 O   ALA 151 8.642   19.186  32.184  1.000  16.51
ANISOU 1069 O   ALA 151 1778    1852    2643    -152   110    3 3 0
ATOM   1070 CB  ALA 151 9.823   19.663  29.236  1.000  18.05
ANISOU 1070 CB  ALA 151 1910    2811    2139    -275   -316 1 6 6
ATOM   1071 N   PHE 152 10.893  19.135  32.306  1.000  14.25
ANISOU 1071 N   PHE 152 1858    1132    2423    10 -107  2 6 3
ATOM   1072 CA  PHE 152 10.893  18.285  33.493  1.000  13.42
ANISOU 1072 CA  PHE 152 1457    1291    2353    -102   -34  3 0 4
ATOM   1073 C   PHE 152 10.406  19.056  34.695  1.000  13.93
ANISOU 1073 C   PHE 152 1481    1400    2412    -43    -165 1 9 6
ATOM   1074 O   PHE 152 9.679   18.495  35.558  1.000  14.50
ANISOU 1074 O   PHE 152 1590    1482    2438    -85    25 2 6
ATOM   1075 CB  PHE 152 12.309  17.744  33.728  1.000  13.95
ANISOU 1075 CB  PHE 152 1504    1547    2248    -29    111    4 6 3
ATOM   1076 CG  PHE 152 12.475  16.966  35.011  1.000  14.04
ANISOU 1076 CG  PHE 152 1747    1386    2200    88 -58 2 4 7
ATOM   1077 CD1 PHE 152 12.032  15.653  35.076  1.000  13.90
ANISOU 1077 CD1 PHE 152 1906    1306    2069    165    -36    2 8 1
ATOM   1078 CD2 PHE 152 13.094  17.499  36.127  1.000  15.67
ANISOU 1078 CD2 PHE 152 1927    1770    2259    -155   -115 2 3 3
ATOM   1079 CE1 PHE 152 12.213  14.949  36.263  1.000  14.06
ANISOU 1079 CE1 PHE 152 1669    1507    2165    182    -282 3 4 7
ATOM   1080 CE2 PHE 152 13.323  16.799  37.276  1.000  14.83
ANISOU 1080 CE2 PHE 152 1724    1671    2240    35 -112  1 6 5
ATOM   1081 CZ  PHE 152 12.861  15.522  37.361  1.000  14.86
ANISOU 1081 CZ  PHE 152 1994    1734    1916    -162   99 1 1 3
ATOM   1082 N   LEU 153 10.789  20.324  34.789  1.000  15.25
ANISOU 1082 N   LEU 153 1742    1355    2696    58 110 1 5 4
ATOM   1083 CA  LEU 153 10.454  21.151  35.939  1.000  14.65
ANISOU 1083 CA  LEU 153 1783    1429    2354    -66    16 2 0 3
ATOM   1084 C   LEU 153 9.082   21.791  35.877  1.000  14.47
ANISOU 1084 C   LEU 153 1732    1402    2362    -80    76 1 1
ATOM   1085 O   LEU 153 8.581   22.216  36.953  1.000  15.82
ANISOU 1085 O   LEU 153 1940    1454    2616    -313   312    - 157
ATOM   1086 CB  LEU 153 11.537  22.224  36.165  1.000  16.53
ANISOU 1086 CB  LEU 153 1626    1451    3205    -23    269    - 8 3
ATOM   1087 CG  LEU 153 12.914  21.685  36.514  1.000  15.90
ANISOU 1087 CG  LEU 153 1893    2013    2135    -33    -186 - 3 6
ATOM   1088 CD1 LEU 153 13.922  22.829  36.614  1.000  18.41
ANISOU 1088 CD1 LEU 153 1732    2473    2791    -156   80 - 876
ATOM   1089 CD2 LEU 153 12.863  20.883  37.794  1.000  21.76
ANISOU 1089 CD2 LEU 153 3083    3182    2005    365    261    1 9 3
ATOM   1090 N   ASP 154 8.473   21.866  34.708  1.000  14.41
ANISOU 1090 N   ASP 154 1768    1181    2525    -25    -8 2 9 3
ATOM   1091 CA  ASP 154 7.092   22.373  34.553  1.000  15.90
ANISOU 1091 CA  ASP 154 1665    1615    2760    -195   27 7 6 9
ATOM   1092 C   ASP 154 6.216   21.161  34.814  1.000  14.66
ANISOU 1092 C   ASP 154 1859    1304    2409    -92    143    5 1 5
ATOM   1093 O   ASP 154 5.995   20.368  33.889  1.000  17.30
ANISOU 1093 O   ASP 154 2561    1455    2557    -29    314    2 3 4
ATOM   1094 CB  ASP 154 6.923   22.909  33.125  1.000  18.59
ANISOU 1094 CB  ASP 154 1905    2077    3081    124    269    1 3 1 7
ATOM   1095 CG  ASP 154 5.461   23.157  32.768  1.000  19.87
ANISOU 1095 CG  ASP 154 2029    2531    2990    226    129    1 4 3 6
ATOM   1096 OD1 ASP 154 4.561   23.253  33.639  1.000  19.68
ANISOU 1096 OD1 ASP 154 1949    2209    3318    92 221 4 9 6
ATOM   1097 OD2 ASP 154 5.207   23.189  31.554  1.000  23.73
ANISOU 1097 OD2 ASP 154 2512    3475    3029    246    -137 6 5 3
ATOM   1098 N   CYS 155 5.831   20.904  36.070  1.000  14.25
ANISOU 1098 N   CYS 155 1708    1365    2342    -101   -62    5 4 6
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ATOM    1099 CA  CYS   155 5.418   19.569  36.468 1.000 13.45
ANISOU  1099 CA  CYS   155 1608   1346    2158   -191    4  4 5 8
ATOM    1100 C   CYS   155 4.157   19.574  37.302 1.000 12.49
ANISOU  1100 C   CYS   155 1644   1331    1772   -200 -148  6 2
ATOM    1101 O   CYS   155 3.224   20.303  36.941 1.000 14.55
ANISOU  1101 O   CYS   155 1633   1492    2402   -122 -111  4 4 2
ATOM    1102 CB  CYS   155 6.664   18.872  37.098 1.000 14.37
ANISOU  1102 CB  CYS   155 1907   1366    2186    122 -137  2 1 1
ATOM    1103 SG  CYS   155 7.265   19.595  38.641 1.000 14.99
ANISOU  1103 SG  CYS   155 1561   1821    2315    -74  -98  1 8 2
ATOM    1104 N   GLU   156 4.060   18.706  38.316 1.000 12.89
ANISOU  1104 N   GLU   156 1575   1379    1945   -130   29 1 9 4
ATOM    1105 CA  GLU   156 2.788   18.447  39.029 1.000 12.98
ANISOU  1105 CA  GLU   156 1508   1311    2114   -210   21 1 4 0
ATOM    1106 C   GLU   156 2.987   18.676  40.510 1.000 12.34
ANISOU  1106 C   GLU   156 1414   1198    2078    102   24 2 0 4
ATOM    1107 O   GLU   156 2.828   17.757  41.289 1.000 14.89
ANISOU  1107 O   GLU   156 1875   1425    2359    -15  -54  4 4 2
ATOM    1108 CB  GLU   156 2.278   17.047  38.678 1.000 14.48
ANISOU  1108 CB  GLU   156 1968   1323    2213   -279  120  8 7
ATOM    1109 CG  GLU   156 1.855   17.038  37.227 1.000 14.86
ANISOU  1109 CG  GLU   156 1894   1526    2227   -120   95 - 1 5 2
ATOM    1110 CD  GLU   156 0.523   17.687  36.932 1.000 17.10
ANISOU  1110 CD  GLU   156 2091   1976    2431     44  -4 1 4 4
ATOM    1111 OE1 GLU   156 -0.204  17.967  37.886 1.000 17.98
ANISOU  1111 OE1 GLU   156 1811   2155    2866    -35   10 - 3 5 5
ATOM    1112 OE2 GLU   156 0.214   17.990  35.759 1.000 20.99
ANISOU  1112 OE2 GLU   156 2854   2419    2704   -386 -516  5 6 2
ATOM    1113 N   PRO   157 3.292   19.893  40.958 1.000 12.09
ANISOU  1113 N   PRO   157 1314   1347    1934     12  -48 2 4 9
ATOM    1114 CA  PRO   157 3.576   20.121  42.391 1.000 13.28
ANISOU  1114 CA  PRO   157 1425   1696    1924    -68  117 1 4 7
ATOM    1115 C   PRO   157 2.330   19.996  43.248 1.000 12.87
ANISOU  1115 C   PRO   157 1236   1737    1916   -214  -47  1 2 4
ATOM    1116 O   PRO   157 1.192   20.190  42.744 1.000 13.73
ANISOU  1116 O   PRO   157 1286   1717    2214   -190  -17  1 4 3
ATOM    1117 CB  PRO   157 4.061   21.580  42.407 1.000 13.94
ANISOU  1117 CB  PRO   157 1518   1729    2047   -289 -166  2 4 7
ATOM    1118 CG  PRO   157 3.363   22.184  41.226 1.000 13.06
ANISOU  1118 CG  PRO   157 1558   1518    1887    -32 -158 - 8 8
ATOM    1119 CD  PRO   157 3.494   21.128  40.167 1.000 12.03
ANISOU  1119 CD  PRO   157 1521   1081    1968     -2  -7 1 2 1
ATOM    1120 N   LEU   158 2.542   19.738  44.526 1.000 13.02
ANISOU  1120 N   LEU   158 1554   1493    1899   -124  148  7 3
ATOM    1121 CA  LEU   158 1.438   19.699  45.496 1.000 12.72
ANISOU  1121 CA  LEU   158 1465   1552    1815   -126  -14  3 6
ATOM    1122 C   LEU   158 1.927   20.389  46.772 1.000 12.90
ANISOU  1122 C   LEU   158 1230   1715    1957    -27  -29  - 8 0
ATOM    1123 O   LEU   158 2.975   19.977  47.289 1.000 14.06
ANISOU  1123 O   LEU   158 1374   1666    2304     59 -257  - 2 3 6
ATOM    1124 CB  LEU   158 1.046   18.244  45.815 1.000 13.58
ANISOU  1124 CB  LEU   158 1673   1590    1896   -213   57 1 7 1
ATOM    1125 CG  LEU   158 0.044   18.030  46.945 1.000 14.84
ANISOU  1125 CG  LEU   158 1471   1774    2396    -16  262  2 4 2
ATOM    1126 CD1 LEU   158 -1.333  18.635  46.671 1.000 16.96
ANISOU  1126 CD1 LEU   158 1485   2196    2764      5 -148  - 4 0 1
ATOM    1127 CD2 LEU   158 -0.142  16.539  47.161 1.000 14.98
ANISOU  1127 CD2 LEU   158 1976   1820    1897   -390  171  7 9
ATOM    1128 N   LEU   159 1.139   21.306  47.283 1.000 13.44
ANISOU  1128 N   LEU   159 1509   1434    2165     43  -87 - 1 1 9
ATOM    1129 CA  LEU   159 1.443   21.963  48.571 1.000 13.39
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ANISOU 1129 CA   LEU  159 1438     1555     2095     -36    -80   - 9 1
ATOM   1130 C    LEU  159 0.419   21.494   49.602 1.000 14.49
ANISOU 1130 C    LEU  159 1336     2034     2135    -152   -208  - 3 8
ATOM   1131 O    LEU  159 -0.790  21.596   49.419 1.000 15.09
ANISOU 1131 O    LEU  159 1414     1999     2319     90  -131    9 0
ATOM   1132 CB   LEU  159 1.390   23.466   48.394 1.000 15.28
ANISOU 1132 CB   LEU  159 1720     1447     2639     55  -325  - 1 9 7
ATOM   1133 CG   LEU  159 1.484   24.320   49.669 1.000 17.11
ANISOU 1133 CG   LEU  159 2146     1689     2665    363   -332 - 3 4 3
ATOM   1134 CD1  LEU  159 2.775   24.114   50.453 1.000 18.70
ANISOU 1134 CD1  LEU  159 2276     1759     3070    379   -687 - 5 4 0
ATOM   1135 CD2  LEU  159 1.312   25.801   49.291 1.000 21.00
ANISOU 1135 CD2  LEU  159 2918     1535     3526    439   -692 - 3 8 2
ATOM   1136 N    ARG  160 0.916   21.107   50.774 1.000 14.37
ANISOU 1136 N    ARG  160 1688     1709     2063    -101  -186  4 7
ATOM   1137 CA   ARG  160 0.055   20.747   51.901 1.000 15.61
ANISOU 1137 CA   ARG  160 1726     1990     2217    -64    90  - 1 1 8
ATOM   1138 C    ARG  160 0.480   21.501   53.155 1.000 15.40
ANISOU 1138 C    ARG  160 1557     2158     2135    -34    -46   - 3 8
ATOM   1139 O    ARG  160 1.639   21.401   53.576 1.000 16.32
ANISOU 1139 O    ARG  160 1528     2508     2164     63  41 - 1 0 4
ATOM   1140 CB   ARG  160 0.048   19.263   52.227 1.000 16.13
ANISOU 1140 CB   ARG  160 2134     2084     1912    -127   -30   1 2 9
ATOM   1141 CG   ARG  160 -0.594  18.410   51.155 1.000 17.17
ANISOU 1141 CG   ARG  160 1963     1934     2628    -140  -212 - 6 0
ATOM   1142 CD   ARG  160 -0.672  16.959   51.627 1.000 18.16
ANISOU 1142 CD   ARG  160 2767     1965     2166    125   -330 - 3 5
ATOM   1143 NE   ARG  160 -1.382  16.102   50.682 1.000 18.11
ANISOU 1143 NE   ARG  160 2408     1775     2699    -56   -308 2 0
ATOM   1144 CZ   ARG  160 -1.221  14.789   50.581 1.000 16.76
ANISOU 1144 CZ   ARG  160 2191     1748     2428    -97    55 1 7 4
ATOM   1145 NH1  ARG  160 -0.326  14.192   51.374 1.000 20.55
ANISOU 1145 NH1  ARG  160 2306     2012     3491    -26   -457 3 0 5
ATOM   1146 NH2  ARG  160 -1.908  14.095   49.689 1.000 19.23
ANISOU 1146 NH2  ARG  160 2502     2031     2774    181   -147 - 3 3 8
ATOM   1147 N    PHE  161 -0.469  22.257   53.755 1.000 15.36
ANISOU 1147 N    PHE  161 1604     2120     2111    -37    -63   - 1 2 8
ATOM   1148 CA   PHE  161 -0.209  22.975   54.999 1.000 16.25
ANISOU 1148 CA   PHE  161 2173     1774     2227    -71   -187 - 8 9
ATOM   1149 C    PHE  161 -1.030  22.236   56.069 1.000 16.98
ANISOU 1149 C    PHE  161 1980     2432     2041    -217  -161 - 1 6 2
ATOM   1150 O    PHE  161 -2.248  22.113   55.948 1.000 20.38
ANISOU 1150 O    PHE  161 1981     3291     2473    -190  -191 - 7 2
ATOM   1151 CB   PHE  161 -0.683  24.431   54.862 1.000 19.76
ANISOU 1151 CB   PHE  161 2065     1903     3540    167    355  - 1 9 8
ATOM   1152 CG   PHE  161 -0.379  25.259   56.109 1.000 23.61
ANISOU 1152 CG   PHE  161 3026     1905     4041    836    -59  - 5 9 1
ATOM   1153 CD1  PHE  161 -1.194  25.304   57.228 1.000 28.25
ANISOU 1153 CD1  PHE  161 3992     2474     4268   1077    369  - 1 2 5 3
ATOM   1154 CD2  PHE  161 0.807   25.978   56.141 1.000 26.62
ANISOU 1154 CD2  PHE  161 4015     2483     3616    -130   -927 - 1 0 6
ATOM   1155 CE1  PHE  161 -0.850  25.992   58.383 1.000 35.29
ANISOU 1155 CE1  PHE  161 6873     2097     4437   1538   -135 - 1 3 9 9
ATOM   1156 CE2  PHE  161 1.153   26.723   57.258 1.000 33.63
ANISOU 1156 CE2  PHE  161 4643     3240     4894   1263   -2085 - 1 2 6 8
ATOM   1157 CZ   PHE  161 0.320   26.726   58.363 1.000 36.44
ANISOU 1157 CZ   PHE  161 6071     4282     3493   1455   -2477 - 1 0 4 4
ATOM   1158 N    ARG  162 -0.358  21.767   57.130 1.000 17.59
ANISOU 1158 N    ARG  162 2095     2487     2103    -118  -135 - 6 9
ATOM   1159 CA   ARG  162 -1.072  21.078   58.199 1.000 18.27
ANISOU 1159 CA   ARG  162 2769     2414     1758     6   178 - 3 7 8
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ATOM    1160 C    ARG  162 -0.880  21.758  59.553 1.000 20.16
ANISOU  1160 C    ARG  162 2110    3341    2210   -36   41 -960
ATOM    1161 O    ARG  162 0.217   22.160  59.893 1.000 19.61
ANISOU  1161 O    ARG  162 2257    2993    2201   -194  -73 -359
ATOM    1162 CB   ARG  162 -0.580  19.640  58.356 1.000 20.81
ANISOU  1162 CB   ARG  162 2958    2275    2675   -129  6 -169
ATOM    1163 CG   ARG  162 -0.843  18.724  57.166 1.000 19.90
ANISOU  1163 CG   ARG  162 3044    2073    2443   -112  254 -38
ATOM    1164 CD   ARG  162 -0.182  17.383  57.393 1.000 28.02
ANISOU  1164 CD   ARG  162 5599    2038    3010   381   -14 114
ATOM    1165 NE   ARG  162 -0.369  16.420  56.326 1.000 27.74
ANISOU  1165 NE   ARG  162 4151    2294    4097   555   -687 -434
ATOM    1166 CZ   ARG  162 -1.278  15.445  56.370 1.000 31.11
ANISOU  1166 CZ   ARG  162 2560    3729    5531   470   -350 -1152
ATOM    1167 NH1  ARG  162 -2.092  15.324  57.403 1.000 42.97
ANISOU  1167 NH1  ARG  162 3475    5906    6946   -579  1019 -2492
ATOM    1168 NH2  ARG  162 -1.329  14.603  55.353 1.000 29.64
ANISOU  1168 NH2  ARG  162 3066    2738    5458   120   -143 -708
ATOM    1169 N    TYR  163 -1.956  21.780  60.311 1.000 19.52
ANISOU  1169 N    TYR  163 2394    2901    2120   147   263 -763
ATOM    1170 CA   TYR  163 -1.943  22.102  61.732 1.000 22.74
ANISOU  1170 CA   TYR  163 3312    3107    2219   369   302 -878
ATOM    1171 C    TYR  163 -2.037  20.800  62.536 1.000 24.20
ANISOU  1171 C    TYR  163 2802    3901    2492   -222  253 -189
ATOM    1172 O    TYR  163 -2.992  20.049  62.274 1.000 28.02
ANISOU  1172 O    TYR  163 2305    4409    3934   -202  -126 399
ATOM    1173 CB   TYR  163 -3.198  22.912  62.114 1.000 28.98
ANISOU  1173 CB   TYR  163 3861    3231    3920   267   1196 -1783
ATOM    1174 CG   TYR  163 -3.342  22.997  63.623 1.000 25.58
ANISOU  1174 CG   TYR  163 2572    3382    3767   543   749 -1204
ATOM    1175 CD1  TYR  163 -2.458  23.826  64.319 1.000 37.32
ANISOU  1175 CD1  TYR  163 3654    6112    4413   -759  884 -2373
ATOM    1176 CD2  TYR  163 -4.315  22.333  64.345 1.000 29.13
ANISOU  1176 CD2  TYR  163 2622    3994    4452   749   1084 -769
ATOM    1177 CE1  TYR  163 -2.546  23.966  65.702 1.000 38.28
ANISOU  1177 CE1  TYR  163 2905    7138    4503   -454  987 -2740
ATOM    1178 CE2  TYR  163 -4.396  22.431  65.726 1.000 37.36
ANISOU  1178 CE2  TYR  163 3220    6336    4640   -273  1997 -1618
ATOM    1179 CZ   TYR  163 -3.500  23.250  66.393 1.000 49.85
ANISOU  1179 CZ   TYR  163 5272    8795    4872   -1810 1593 -2223
ATOM    1180 OH   TYR  163 -3.595  23.365  67.768 1.000 44.81
ANISOU  1180 OH   TYR  163 5246    7368    4413   -222  270 -496
ATOM    1181 N    PHE  164 -1.098  20.651  63.448 1.000 24.84
ANISOU  1181 N    PHE  164 2905    3368    3164   -89   -125 -361
ATOM    1182 CA   PHE  164 -1.045  19.532  64.370 1.000 28.14
ANISOU  1182 CA   PHE  164 3538    3957    3195   223   -163 -30
ATOM    1183 C    PHE  164 -1.360  20.003  65.787 1.000 26.67
ANISOU  1183 C    PHE  164 2964    3937    3234   -473  -194 -257
ATOM    1184 O    PHE  164 -0.540  20.730  66.342 1.000 31.26
ANISOU  1184 O    PHE  164 3119    4888    3869   -959  -260 -519
ATOM    1185 CB   PHE  164 0.347   18.881  64.396 1.000 27.86
ANISOU  1185 CB   PHE  164 3423    3725    3436   76    -199 -32
ATOM    1186 CG   PHE  164 0.744   18.301  63.052 1.000 26.77
ANISOU  1186 CG   PHE  164 2914    3474    3785   -598  74 -275
ATOM    1187 CD1  PHE  164 1.435   19.093  62.143 1.000 26.16
ANISOU  1187 CD1  PHE  164 2827    3836    3278   135   -615 711
ATOM    1188 CD2  PHE  164 0.414   16.996  62.717 1.000 31.24
ANISOU  1188 CD2  PHE  164 4365    2808    4698   349   -298 -96
ATOM    1189 CE1  PHE  164 1.787   18.609  60.894 1.000 30.09
ANISOU  1189 CE1  PHE  164 3609    5052    2771   -148  -1030 641
ATOM    1190 CE2  PHE  164 0.786   16.501  61.475 1.000 38.25
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ANISOU 1190 CE2 PHE  164 6659     4077     3797    -740  -1363 -612
ATOM   1191 CZ  PHE  164 1.494   17.298   60.588 1.000 32.74
ANISOU 1191 CZ  PHE  164 3189     5078     4172     712  -944  -385
ATOM   1192 N   PRO  165 -2.469  19.609   66.379 1.000 30.62
ANISOU 1192 N   PRO  165 3876     4009     3751   -1371  344  -508
ATOM   1193 CA  PRO  165 -2.670  19.813   67.809 1.000 33.09
ANISOU 1193 CA  PRO  165 3299     5764     3510    -190   80  236
ATOM   1194 C   PRO  165 -1.459  19.408   68.638 1.000 36.32
ANISOU 1194 C   PRO  165 3538     5745     4518     664  -191 -234
ATOM   1195 O   PRO  165 -0.776  18.428   68.371 1.000 32.94
ANISOU 1195 O   PRO  165 4268     4761     3487     220  501  387
ATOM   1196 CB  PRO  165 -3.882  18.929   68.123 1.000 38.44
ANISOU 1196 CB  PRO  165 3807     6924     3873    -765  271  827
ATOM   1197 CG  PRO  165 -4.635  18.842   66.845 1.000 35.82
ANISOU 1197 CG  PRO  165 2595     7020     3995       5  688 -828
ATOM   1198 CD  PRO  165 -3.690  19.130   65.710 1.000 33.90
ANISOU 1198 CD  PRO  165 3192     5919     3770   -1149  194  169
ATOM   1199 N   LEU  178 7.727    7.453   68.180 1.000 64.52
ANISOU 1199 N   LEU  178 12297    5376     6843     278  -218 3721
ATOM   1200 CA  LEU  178 7.629    8.260   66.973 1.000 43.31
ANISOU 1200 CA  LEU  178 10557    2730     3168    -984 -2821 -135
ATOM   1201 C   LEU  178 6.159    8.539   66.662 1.000 47.36
ANISOU 1201 C   LEU  178 9239     3530     5225   -2598 -1186 1204
ATOM   1202 O   LEU  178 5.314    7.659   66.796 1.000 56.53
ANISOU 1202 O   LEU  178 11777    5626     4076   -4835 1265 -602
ATOM   1203 CB  LEU  178 8.222    7.582   65.746 1.000 55.55
ANISOU 1203 CB  LEU  178 11470    3734     5902   -1314 -1197 -1822
ATOM   1204 CG  LEU  178 9.662    7.092   65.774 1.000 62.34
ANISOU 1204 CG  LEU  178 10812    5116     7760   -1971  194  -443
ATOM   1205 CD1 LEU  178 9.916    6.185   64.579 1.000 54.23
ANISOU 1205 CD1 LEU  178 9626     4989     5988    1878 -3799 511
ATOM   1206 CD2 LEU  178 10.633   8.264   65.773 1.000 66.44
ANISOU 1206 CD2 LEU  178 11265    3454    10526   -1170 4090 -516
ATOM   1207 N   ARG  179 5.879    9.751   66.192 1.000 52.90
ANISOU 1207 N   ARG  179 7853     3826     8421     102  1230 1031
ATOM   1208 CA  ARG  179 4.495   10.033   65.807 1.000 51.26
ANISOU 1208 CA  ARG  179 7235     4820     7421    -229  1890 -383
ATOM   1209 C   ARG  179 4.242    9.563   64.383 1.000 55.25
ANISOU 1209 C   ARG  179 7178     6083     7731    -946  2260 -1134
ATOM   1210 O   ARG  179 3.120    9.211   64.021 1.000 58.51
ANISOU 1210 O   ARG  179 7036     7628     7565   -1820 3675 -2851
ATOM   1211 CB  ARG  179 4.180   11.512   66.040 1.000 41.49
ANISOU 1211 CB  ARG  179 6600     4448     4716    -155  1916 1137
ATOM   1212 CG  ARG  179 3.293   11.700   67.277 1.000 43.15
ANISOU 1212 CG  ARG  179 6120     5908     4367      90  1338 530
ATOM   1213 CD  ARG  179 1.888   12.059   66.833 1.000 47.63
ANISOU 1213 CD  ARG  179 6180     7453     4463     195  860  -531
ATOM   1214 NE  ARG  179 1.459   13.367   67.269 1.000 52.00
ANISOU 1214 NE  ARG  179 7384     7834     4539    1669 -1168 -538
ATOM   1215 CZ  ARG  179 1.322   14.470   66.556 1.000 64.81
ANISOU 1215 CZ  ARG  179 10838    8000     5788    1457 -1107  6 3
ATOM   1216 NH1 ARG  179 1.637   14.518   65.268 1.000 59.74
ANISOU 1216 NH1 ARG  179 9535     8090     5074    3628 -2691 445
ATOM   1217 NH2 ARG  179 0.907   15.606   67.117 1.000 65.83
ANISOU 1217 NH2 ARG  179 10451    9083     5478    4171  -776 1200
ATOM   1218 N   MET  180 5.304    9.501   63.589 1.000 43.96
ANISOU 1218 N   MET  180 5383     3769     7550     705  852 -1245
ATOM   1219 CA  MET  180 5.264    9.035   62.210 1.000 40.44
ANISOU 1219 CA  MET  180 2356     5467     7543    -398  574 -1482
ATOM   1220 C   MET  180 6.552    8.258   61.920 1.000 43.91
ANISOU 1220 C   MET  180 2731     6220     7733      18  320 -2324
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SUBSTITUTE SHEET (RULE 26)

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ATOM    1221 O    MET  180  7.629   8.679   62.327 1.000 39.46
ANISOU  1221 O    MET  180 2377    5064    7554    -395   906  -912
ATOM    1222 CB   MET  180  5.129   10.189  61.219 1.000 49.84
ANISOU  1222 CB   MET  180 2749    7966    8223    -452  -1114  7 2
ATOM    1223 CG   MET  180  5.339   9.818   59.757 1.000 62.58
ANISOU  1223 CG   MET  180 7280    8911    7587    -2331 -3353 - 5 0 5
ATOM    1224 SD   MET  180  4.622   11.015  58.608 1.000 74.24
ANISOU  1224 SD   MET  180 7480    13510   7216    4918  -262 -9 0 5
ATOM    1225 CE   MET  180  4.501   10.037  57.110 1.000 79.59
ANISOU  1225 CE   MET  180 6119    20000   4120    -1978 1874 -912
ATOM    1226 N    ALA  181  6.376   7.112   61.275 1.000 37.44
ANISOU  1226 N    ALA  181 3523    5646    5055    -271   882  -1132
ATOM    1227 CA   ALA  181  7.407   6.140   60.986 1.000 37.40
ANISOU  1227 CA   ALA  181 3980    3980    6250    -625  2048 461
ATOM    1228 C    ALA  181  8.287   6.591   59.837 1.000 31.49
ANISOU  1228 C    ALA  181 2975    3842    5149    -32    920  956
ATOM    1229 O    ALA  181  7.834   7.393   58.997 1.000 30.77
ANISOU  1229 O    ALA  181 2903    4021    4765    197   -98   164
ATOM    1230 CB   ALA  181  6.727   4.817   60.620 1.000 42.66
ANISOU  1230 CB   ALA  181 4105    4284    7820    -1023 1629 557
ATOM    1231 N    PRO  182  9.541   6.137   59.840 1.000 24.52
ANISOU  1231 N    PRO  182 2782    4237    2296    -240  -76  3 2 0
ATOM    1232 CA   PRO  182  10.442  6.667   58.820 1.000 20.55
ANISOU  1232 CA   PRO  182 2612    2870    2326    -335  -117 - 6 5
ATOM    1233 C    PRO  182  9.958   6.402   57.408 1.000 19.31
ANISOU  1233 C    PRO  182 2609    2491    2236    -391   48 - 8 6
ATOM    1234 O    PRO  182  9.448   5.326   57.080 1.000 21.68
ANISOU  1234 O    PRO  182 2991    2486    2759    -440  -340 - 5 5
ATOM    1235 CB   PRO  182  11.768  5.939   59.047 1.000 24.98
ANISOU  1235 CB   PRO  182 2589    3860    3042    -170  -286 153
ATOM    1236 CG   PRO  182  11.681  5.351   60.393 1.000 28.42
ANISOU  1236 CG   PRO  182 3352    3582    3863    656    321  1038
ATOM    1237 CD   PRO  182  10.215  5.210   60.747 1.000 32.21
ANISOU  1237 CD   PRO  182 3333    4905    4000    -826  -390 1785
ATOM    1238 N    HIS  183  10.111  7.414   56.561 1.000 19.27
ANISOU  1238 N    HIS  183 2131    2658    2533    -274  -204 176
ATOM    1239 CA   HIS  183  9.757   7.306   55.144 1.000 18.01
ANISOU  1239 CA   HIS  183 1882    2311    2652    -341  -455 346
ATOM    1240 C    HIS  183  10.749  8.124   54.337 1.000 15.74
ANISOU  1240 C    HIS  183 1964    1560    2456    -75   -352 128
ATOM    1241 O    HIS  183  11.355  9.061   54.868 1.000 18.14
ANISOU  1241 O    HIS  183 2297    2093    2504    -509  -127 -135
ATOM    1242 CB   HIS  183  8.338   7.781   54.835 1.000 18.66
ANISOU  1242 CB   HIS  183 1970    2173    2945    -136  -243 371
ATOM    1243 CG   HIS  183  8.089   9.120   55.447 1.000 26.67
ANISOU  1243 CG   HIS  183 3100    2751    4281    262    222  -306
ATOM    1244 ND1  HIS  183  7.884   9.362   56.800 1.000 35.36
ANISOU  1244 ND1  HIS  183 4432    4078    4926    -1190 1466 -1454
ATOM    1245 CD2  HIS  183  8.051   10.311  54.821 1.000 33.00
ANISOU  1245 CD2  HIS  183 4117    2522    5898    1687  -677 -173
ATOM    1246 CE1  HIS  183  7.739   10.658  56.980 1.000 35.91
ANISOU  1246 CE1  HIS  183 2611    4468    6565    -472  -625 -2616
ATOM    1247 NE2  HIS  183  7.829   11.251  55.798 1.000 40.55
ANISOU  1247 NE2  HIS  183 4375    3417    7614    1821  -1013 -1590
ATOM    1248 N    TYR  184  10.890  7.778   53.061 1.000 15.68
ANISOU  1248 N    TYR  184 1973    1551    2434    -124  -470 107
ATOM    1249 CA   TYR  184  11.605  8.685   52.152 1.000 14.81
ANISOU  1249 CA   TYR  184 1798    1392    2438    147   -312 145
ATOM    1250 C    TYR  184  10.572  9.239   51.169 1.000 14.53
ANISOU  1250 C    TYR  184 1656    1449    2416    -70   -399 9 8
ATOM    1251 O    TYR  184  9.468   8.728   51.045 1.000 15.83
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- 54 -

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ANISOU 1251 O    TYR   184 1717    1383    2916   -103  -443 150
ATOM   1252 CB   TYR   184 12.699  8.004   51.360 1.000 15.66
ANISOU 1252 CB   TYR   184 1686    1323    2943    69  -366  -168
ATOM   1253 CG   TYR   184 12.383  6.785   50.562 1.000 14.85
ANISOU 1253 CG   TYR   184 1743    1313    2586   109  -567 4 3
ATOM   1254 CD1  TYR   184 12.200  5.540   51.185 1.000 15.49
ANISOU 1254 CD1  TYR   184 1549    1315    3021   -29  -575 1 9 0
ATOM   1255 CD2  TYR   184 12.329  6.836   49.165 1.000 15.89
ANISOU 1255 CD2  TYR   184 1724    1763    2552    55  -27  - 64
ATOM   1256 CE1  TYR   184 11.962  4.396   50.442 1.000 15.61
ANISOU 1256 CE1  TYR   184 1695    1244    2992   229  -137 1 13
ATOM   1257 CE2  TYR   184 12.130  5.661   48.447 1.000 17.52
ANISOU 1257 CE2  TYR   184 2340    1776    2540    4   83  - 90
ATOM   1258 CZ   TYR   184 11.915  4.449   49.083 1.000 16.96
ANISOU 1258 CZ   TYR   184 1695    1736    3014   -156  -480 3 4
ATOM   1259 OH   TYR   184 11.682  3.325   48.310 1.000 18.81
ANISOU 1259 OH   TYR   184 2020    1775    3352   260  -277 - 3 1 2
ATOM   1260 N    ASP   185 10.924  10.330  50.502 1.000 14.36
ANISOU 1260 N    ASP   185 1518    1599    2338    87  -225  2 7 6
ATOM   1261 CA   ASP   185 10.026  11.005  49.574 1.000 13.88
ANISOU 1261 CA   ASP   185 1875    1322    2078   141  -364 - 4 2
ATOM   1262 C    ASP   185 10.240  10.490  48.152 1.000 12.57
ANISOU 1262 C    ASP   185 1182    1385    2211   -160  -77  - 1 3 0
ATOM   1263 O    ASP   185 11.357  10.135  47.824 1.000 14.14
ANISOU 1263 O    ASP   185 1177    1637    2559   -135  146  1 4 0
ATOM   1264 CB   ASP   185 10.294  12.521  49.580 1.000 14.97
ANISOU 1264 CB   ASP   185 1879    1293    2517   121  -186 - 1 5 9
ATOM   1265 CG   ASP   185 9.702   13.155  50.830 1.000 17.61
ANISOU 1265 CG   ASP   185 2680    1659    2351   232  -13  - 1 7 2
ATOM   1266 OD1  ASP   185 9.507   12.466  51.856 1.000 23.69
ANISOU 1266 OD1  ASP   185 3553    3133    2314   443  -302 5 2 1
ATOM   1267 OD2  ASP   185 9.174   14.257  50.742 1.000 24.32
ANISOU 1267 OD2  ASP   185 4063    1730    3449   644   1140 - 1 6
ATOM   1268 N    LEU   186 9.141   10.465  47.382 1.000 12.57
ANISOU 1268 N    LEU   186 1271    1378    2126   -117  -117 - 1 1 7
ATOM   1269 CA   LEU   186 9.169   10.091  45.986 1.000 12.92
ANISOU 1269 CA   LEU   186 1533    1225    2150   -331  -84  - 1 7 5
ATOM   1270 C    LEU   186 9.134   11.292  45.052 1.000 14.12
ANISOU 1270 C    LEU   186 1730    1307    2330   -93  -165 5 5
ATOM   1271 O    LEU   186 8.971   11.173  43.849 1.000 20.12
ANISOU 1271 O    LEU   186 3721    1643    2280   -423  99 9 2
ATOM   1272 CB   LEU   186 8.040   9.106   45.609 1.000 13.72
ANISOU 1272 CB   LEU   186 1509    1310    2393   -270  -375 - 6
ATOM   1273 CG   LEU   186 8.020   7.811   46.438 1.000 15.92
ANISOU 1273 CG   LEU   186 1549    1141    3361   -145  -307 1 6 8
ATOM   1274 CD1  LEU   186 6.929   6.908   45.866 1.000 19.36
ANISOU 1274 CD1  LEU   186 1686    1845    3825   -700  -209 3 9 6
ATOM   1275 CD2  LEU   186 9.369   7.115   46.341 1.000 18.32
ANISOU 1275 CD2  LEU   186 1689    1742    3528   200  -432 1 7 9
ATOM   1276 N    SER   187 9.286   12.494  45.618 1.000 13.60
ANISOU 1276 N    SER   187 1326    1234    2608   -26  -95  1 3 7
ATOM   1277 CA   SER   187 9.388   13.734  44.826 1.000 13.22
ANISOU 1277 CA   SER   187 1489    1197    2338   -54  -68  2 9
ATOM   1278 C    SER   187 10.736  13.853  44.134 1.000 12.79
ANISOU 1278 C    SER   187 1482    1186    2192   -17  -114 - 9 0
ATOM   1279 O    SER   187 11.683  13.076  44.356 1.000 14.50
ANISOU 1279 O    SER   187 1532    1257    2720    76  -224  - 1 1 3
ATOM   1280 CB   SER   187 9.201   14.915  45.811 1.000 12.87
ANISOU 1280 CB   SER   187 1463    1282    2147   164  -154 9 8
ATOM   1281 OG   SER   187 10.296  14.873  46.716 1.000 13.22
ANISOU 1281 OG   SER   187 1589    1420    2015   -34  -143 2 2 4
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ATOM     1282 N    MET  188 10.898  14.844  43.292 1.000 13.44
ANISOU   1282 N    MET  188 1552    1334    2221   -64   -34  - 2 6
ATOM     1283 CA   MET  188 12.215  15.380  42.878 1.000 12.11
ANISOU   1283 CA   MET  188 1508    1261    1833    29 -60  - 6 1
ATOM     1284 C    MET  188 12.853  16.022  44.104 1.000 12.78
ANISOU   1284 C    MET  188 1563    1156    2136   167   -311  - 4 2
ATOM     1285 O    MET  188 13.896  15.550  44.600 1.000 13.40
ANISOU   1285 O    MET  188 1408    1390    2294   116   -264  - 2 6
ATOM     1286 CB   MET  188 12.038  16.300  41.667 1.000 13.66
ANISOU   1286 CB   MET  188 1565    1501    2123    44 -161   2 0 7
ATOM     1287 CG   MET  188 13.296  17.095  41.315 1.000 14.05
ANISOU   1287 CG   MET  188 1697    1595    2046    66 150 1 3 3
ATOM     1288 SD   MET  188 14.600  15.971  40.752 1.000 14.96
ANISOU   1288 SD   MET  188 1565    1591    2529   109   -81  1 1 0
ATOM     1289 CE   MET  188 16.005  17.102  40.686 1.000 17.74
ANISOU   1289 CE   MET  188 1852    2032    2855   -242   505  1 2 1
ATOM     1290 N    VAL  189 12.244  17.112  44.616 1.000 12.62
ANISOU   1290 N    VAL  189 1586    1203    2007   103   -147 -1 3 4
ATOM     1291 CA   VAL  189 12.565  17.671  45.918 1.000 12.60
ANISOU   1291 CA   VAL  189 1412    1438    1937   -228   -11  - 4 4
ATOM     1292 C    VAL  189 11.285  17.968  46.679 1.000 11.71
ANISOU   1292 C    VAL  189 1328    1294    1825   -170   -171 - 4 9
ATOM     1293 O    VAL  189 10.227  18.099  46.050 1.000 12.56
ANISOU   1293 O    VAL  189 1446    1291    2036    21 -320   - 4 9
ATOM     1294 CB   VAL  189 13.440  18.955  45.856 1.000 12.95
ANISOU   1294 CB   VAL  189 1150    1517    2252   -174   -205 9 4
ATOM     1295 CG1  VAL  189 14.778  18.637  45.167 1.000 15.54
ANISOU   1295 CG1  VAL  189 1376    2094    2437   -140   161  9 1
ATOM     1296 CG2  VAL  189 12.730  20.056  45.082 1.000 15.00
ANISOU   1296 CG2  VAL  189 1763    1391    2547   -130   -483 8 1
ATOM     1297 N    THR  190 11.425  18.067  47.984 1.000 12.18
ANISOU   1297 N    THR  190 1445    1422    1760   -109   -130 1 0
ATOM     1298 CA   THR  190 10.353  18.454  48.897 1.000 11.98
ANISOU   1298 CA   THR  190 1292    1356    1903   -57   -221 -1 5 1
ATOM     1299 C    THR  190 10.879  19.630  49.710 1.000 12.47
ANISOU   1299 C    THR  190 1178    1436    2124   -32   -297 -2 3 2
ATOM     1300 O    THR  190 11.959  19.523  50.320 1.000 15.06
ANISOU   1300 O    THR  190 1424    1767    2531    46 -571   - 4 4 6
ATOM     1301 CB   THR  190 9.913   17.297  49.808 1.000 13.16
ANISOU   1301 CB   THR  190 1509    1605    1886   -168   80 - 1 2 1
ATOM     1302 OG1  THR  190 9.481   16.201  48.993 1.000 14.47
ANISOU   1302 OG1  THR  190 1693    1469    2334   -100   -25  - 1 9 4
ATOM     1303 CG2  THR  190 8.778   17.723  50.734 1.000 14.79
ANISOU   1303 CG2  THR  190 1696    1510    2415    73 258 - 8 9
ATOM     1304 N    LEU  191 10.148  20.724  49.732 1.000 12.97
ANISOU   1304 N    LEU  191 1329    1449    2149    23 -21 - 2 8 6
ATOM     1305 CA   LEU  191 10.511  21.908  50.526 1.000 13.75
ANISOU   1305 CA   LEU  191 1543    1442    2238    78 -206   - 3 0 1
ATOM     1306 C    LEU  191 9.603   21.964  51.763 1.000 14.47
ANISOU   1306 C    LEU  191 1543    1689    2265    83 -179   - 4 1 2
ATOM     1307 O    LEU  191 8.370   21.868  51.645 1.000 16.58
ANISOU   1307 O    LEU  191 1517    2486    2297   219   -176 -7 2 5
ATOM     1308 CB   LEU  191 10.398  23.212  49.722 1.000 15.37
ANISOU   1308 CB   LEU  191 1717    1444    2680    58 -106   - 1 8 9
ATOM     1309 CG   LEU  191 11.705  23.578  48.973 1.000 16.10
ANISOU   1309 CG   LEU  191 1747    1688    2680   -128   -113 -1 3 5
ATOM     1310 CD1  LEU  191 12.069  22.565  47.906 1.000 16.67
ANISOU   1310 CD1  LEU  191 2034    2093    2209   -23   -64  1 9
ATOM     1311 CD2  LEU  191 11.570  24.959  48.350 1.000 18.53
ANISOU   1311 CD2  LEU  191 2297    1906    2837   -345   -437 1 4 8
ATOM     1312 N    ILE  192 10.199  22.148  52.946 1.000 15.36
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ANISOU 1312 N    ILE  192 1479   2152   2204    -47   -165  -164
ATOM   1313 CA   ILE  192 9.417  22.162 54.194 1.000 15.13
ANISOU 1313 CA   ILE  192 1456   2043   2251   -304   -173  -280
ATOM   1314 C    ILE  192 9.692  23.423 55.010 1.000 15.58
ANISOU 1314 C    ILE  192 1696   1973   2251   -199   -254  -226
ATOM   1315 O    ILE  192 10.836 23.691 55.381 1.000 17.20
ANISOU 1315 O    ILE  192 1856   2449   2229   -307   -341  -574
ATOM   1316 CB   ILE  192 9.722  20.920 55.040 1.000 17.03
ANISOU 1316 CB   ILE  192 2246   1958   2266    -52    325  -303
ATOM   1317 CG1  ILE  192 9.454  19.596 54.317 1.000 19.80
ANISOU 1317 CG1  ILE  192 3040   2010   2473    -71    128  -382
ATOM   1318 CG2  ILE  192 8.995  20.967 56.403 1.000 18.14
ANISOU 1318 CG2  ILE  192 2278   2354   2262    229    290  -258
ATOM   1319 CD1  ILE  192 9.420  18.387 55.235 1.000 31.57
ANISOU 1319 CD1  ILE  192 4658   2114   5222   -398  -1094   765
ATOM   1320 N    GLN  193 8.625  24.172 55.249 1.000 17.04
ANISOU 1320 N    GLN  193 2042   2185   2248    112   -388  -301
ATOM   1321 CA   GLN  193 8.680  25.291 56.201 1.000 17.70
ANISOU 1321 CA   GLN  193 1737   2167   2824   -204   -186  -559
ATOM   1322 C    GLN  193 7.898  24.869 57.443 1.000 19.67
ANISOU 1322 C    GLN  193 1882   2624   2969   -232    211  -840
ATOM   1323 O    GLN  193 7.082  23.942 57.426 1.000 26.60
ANISOU 1323 O    GLN  193 2066   3843   4197   -965   -110   62
ATOM   1324 CB   GLN  193 8.129  26.598 55.643 1.000 23.74
ANISOU 1324 CB   GLN  193 3070   2388   3561    500    -98  -514
ATOM   1325 CG   GLN  193 8.913  27.304 54.559 1.000 28.26
ANISOU 1325 CG   GLN  193 4664   2384   3689    656    209   0
ATOM   1326 CD   GLN  193 8.338  28.665 54.156 1.000 26.30
ANISOU 1326 CD   GLN  193 2868   2943   4181    791      3   111
ATOM   1327 OE1  GLN  193 7.193  28.695 53.688 1.000 45.31
ANISOU 1327 OE1  GLN  193 2826   7147   7241    -51   -616  3173
ATOM   1328 NE2  GLN  193 9.080  29.748 54.345 1.000 30.44
ANISOU 1328 NE2  GLN  193 3609   2588   5368    418   1259   692
ATOM   1329 N    GLN  194 8.241  25.259 58.645 1.000 22.04
ANISOU 1329 N    GLN  194 2926   2758   2690    303   -368  -83
ATOM   1330 CA   GLN  194 7.569  24.793 59.847 1.000 22.68
ANISOU 1330 CA   GLN  194 3144   2617   2855     82   -230  -150
ATOM   1331 C    GLN  194 7.275  26.054 60.663 1.000 22.19
ANISOU 1331 C    GLN  194 2809   2768   2856    117   -396  -320
ATOM   1332 O    GLN  194 7.889  27.100 60.418 1.000 25.26
ANISOU 1332 O    GLN  194 4041   2877   2679   -313    -21  -411
ATOM   1333 CB   GLN  194 8.467  23.943 60.739 1.000 29.21
ANISOU 1333 CB   GLN  194 4493   2707   3899    477    -50   939
ATOM   1334 CG   GLN  194 9.105  22.735 60.083 1.000 28.80
ANISOU 1334 CG   GLN  194 3108   3530   4305    576   -121   494
ATOM   1335 CD   GLN  194 10.296 22.332 60.962 1.000 31.97
ANISOU 1335 CD   GLN  194 2961   5384   3800    824    359  1075
ATOM   1336 OE1  GLN  194 11.421 22.325 60.474 1.000 27.28
ANISOU 1336 OE1  GLN  194 2781   4189   3397    118    133  -249
ATOM   1337 NE2  GLN  194 9.998  22.100 62.232 1.000 29.82
ANISOU 1337 NE2  GLN  194 3540   3958   3832    989    645   800
ATOM   1338 N    THR  195 6.419  25.891 61.658 1.000 23.30
ANISOU 1338 N    THR  195 2407   3058   3387   -211   -235  -720
ATOM   1339 CA   THR  195 6.476  26.833 62.768 1.000 27.14
ANISOU 1339 CA   THR  195 3459   3544   3308     25    -50  -890
ATOM   1340 C    THR  195 6.933  25.997 63.958 1.000 26.11
ANISOU 1340 C    THR  195 3825   2829   3268    558     19 -1247
ATOM   1341 O    THR  195 6.639  24.815 63.994 1.000 28.17
ANISOU 1341 O    THR  195 2973   2916   4815    481    171 -1030
ATOM   1342 CB   THR  195 5.149  27.534 63.069 1.000 25.87
ANISOU 1342 CB   THR  195 3428   2849   3551    -16   -592 -1137
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- 57 -

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ATOM    1343 OG1 THR  195 4.111   26.550 63.196 1.000 25.45
ANISOU  1343 OG1 THR  195 3427    3101   3141   -9  -117  -750
ATOM    1344 CG2 THR  195 4.788   28.396 61.847 1.000 31.31
ANISOU  1344 CG2 THR  195 4965    2552   4380   274  -70  -409
ATOM    1345 N   PRO  196 7.604   26.587 64.923 1.000 30.84
ANISOU  1345 N   PRO  196 5225    3191   3300   785 -517 -1542
ATOM    1346 CA  PRO  196 8.101   25.823 66.065 1.000 28.50
ANISOU  1346 CA  PRO  196 3113    3700   4016   -279 -441 -646
ATOM    1347 C   PRO  196 7.018   25.534 67.096 1.000 28.97
ANISOU  1347 C   PRO  196 3581    3326   4102   42 113 -1381
ATOM    1348 O   PRO  196 6.002   26.229 67.192 1.000 32.32
ANISOU  1348 O   PRO  196 4146    4649   3485   901 -180 -1658
ATOM    1349 CB  PRO  196 9.094   26.816 66.694 1.000 29.72
ANISOU  1349 CB  PRO  196 3888    3292   4111   -285 -353 -1072
ATOM    1350 CG  PRO  196 8.533   28.174 66.364 1.000 34.87
ANISOU  1350 CG  PRO  196 6285    3575   3390   421 -1326 -1332
ATOM    1351 CD  PRO  196 7.897   28.035 65.012 1.000 33.20
ANISOU  1351 CD  PRO  196 6407    3606   2600   -598 -494 -1031
ATOM    1352 N   CYS  197 7.289   24.533 67.919 1.000 26.96
ANISOU  1352 N   CYS  197 2739    4038   3465   -113  85 -1227
ATOM    1353 CA  CYS  197 6.519   24.289 69.126 1.000 31.73
ANISOU  1353 CA  CYS  197 3979    4543   3533   -39  721  -1726
ATOM    1354 C   CYS  197 6.803   25.412 70.124 1.000 35.58
ANISOU  1354 C   CYS  197 4213    4819   4486   -480 1126 -2282
ATOM    1355 O   CYS  197 7.917   25.939 70.175 1.000 31.34
ANISOU  1355 O   CYS  197 3817    4845   3246   36 -383  -992
ATOM    1356 CB  CYS  197 6.940   22.962 69.767 1.000 35.79
ANISOU  1356 CB  CYS  197 5913    4705   2980   284 1566 -1423
ATOM    1357 SG  CYS  197 6.553   21.535 68.741 1.000 28.53
ANISOU  1357 SG  CYS  197 3605    4224   3009   50  -5  -452
ATOM    1358 N   ALA  198 5.771   25.791 70.866 1.000 37.27
ANISOU  1358 N   ALA  198 5038    4984   4139   -421 1647 -2070
ATOM    1359 CA  ALA  198 5.983   26.811 71.888 1.000 35.91
ANISOU  1359 CA  ALA  198 6273    4144   3230   910  522  -1230
ATOM    1360 C   ALA  198 6.993   26.328 72.921 1.000 44.30
ANISOU  1360 C   ALA  198 5998    6138   4696   -193 -199 3 3
ATOM    1361 O   ALA  197 7.759   27.127 73.457 1.000 42.85
ANISOU  1361 O   ALA  198 5209    6328   4742   7  490 -555
ATOM    1362 CB  ALA  198 4.671   27.231 72.532 1.000 41.70
ANISOU  1362 CB  ALA  198 7588    5697   2557   2355 1068 -721
ATOM    1363 N   ASN  199 7.036   25.036 73.225 1.000 34.93
ANISOU  1363 N   ASN  199 4027    5975   3270   805  167  -621
ATOM    1364 CA  ASN  199 7.969   24.578 74.264 1.000 33.58
ANISOU  1364 CA  ASN  199 3643    6167   2950   -670 -265 -808
ATOM    1365 C   ASN  199 9.352   24.262 73.718 1.000 31.53
ANISOU  1365 C   ASN  199 4077    5048   2853   384 -420 -855
ATOM    1366 O   ASN  199 10.153  23.667 74.467 1.000 36.33
ANISOU  1366 O   ASN  199 4223    5624   3957   -403 -1305 -126
ATOM    1367 CB  ASN  199 7.441   23.308 74.929 1.000 36.38
ANISOU  1367 CB  ASN  199 4533    5029   4262   859  584  -522
ATOM    1368 CG  ASN  199 7.198   22.180 73.952 1.000 31.28
ANISOU  1368 CG  ASN  199 4030    4863   2993   882  202  178
ATOM    1369 OD1 ASN  199 7.743   22.151 72.853 1.000 37.62
ANISOU  1369 OD1 ASN  199 4693    6272   3330   122  728  -56
ATOM    1370 ND2 ASN  199 6.393   21.190 74.314 1.000 36.42
ANISOU  1370 ND2 ASN  199 3508    6251   4078   -13 1132 -958
ATOM    1371 N   GLY  200 9.616   24.569 72.449 1.000 30.93
ANISOU  1371 N   GLY  200 4342    4232   3179   436  144  -692
ATOM    1372 CA  GLY  200 10.920  24.304 71.866 1.000 35.26
ANISOU  1372 CA  GLY  200 4430    4905   4060   -317 480 -2400
ATOM    1373 C   GLY  200 11.184  22.886 71.429 1.000 36.83
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SUBSTITUTE SHEET (RULE 26)

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ANISOU 1373 C    GLY 200 4683      4375      4936     -360  1601 -1460
ATOM   1374 O    GLY 200 12.257  22.566  70.897 1.000 32.71
ANISOU 1374 O    GLY 200 3921      4072      4436     -377   752 -1400
ATOM   1375 N    PHE 201 10.264  21.939  71.588 1.000 28.66
ANISOU 1375 N    PHE 201 3813      4229      2847      145   463  -326
ATOM   1376 CA   PHE 201 10.491  20.575  71.106 1.000 27.55
ANISOU 1376 CA   PHE 201 3190      4337      2943     -233   219  -672
ATOM   1377 C    PHE 201 10.752  20.553  69.600 1.000 24.89
ANISOU 1377 C    PHE 201 2943      3682      2832      190  -268  -379
ATOM   1378 O    PHE 201 9.994   21.255  68.910 1.000 28.22
ANISOU 1378 O    PHE 201 3583      3184      3957       10  -421   277
ATOM   1379 CB   PHE 201 9.250   19.729  71.413 1.000 30.46
ANISOU 1379 CB   PHE 201 3153      4862      3560     -371   -40   -73
ATOM   1380 CG   PHE 201 9.425   18.262  71.027 1.000 34.89
ANISOU 1380 CG   PHE 201 4015      4609      4632     -772   162    89
ATOM   1381 CD1  PHE 201 10.395  17.472  71.605 1.000 31.18
ANISOU 1381 CD1  PHE 201 3436      4103      4310     -875   -93 -1105
ATOM   1382 CD2  PHE 201 8.613   17.681  70.078 1.000 28.84
ANISOU 1382 CD2  PHE 201 2979      4019      3960      329   612  -107
ATOM   1383 CE1  PHE 201 10.564  16.160  71.240 1.000 37.73
ANISOU 1383 CE1  PHE 201 6489      3608      4239    -1078 -1475  -500
ATOM   1384 CE2  PHE 201 8.761   16.363  69.679 1.000 31.78
ANISOU 1384 CE2  PHE 201 4327      3911      3838      652   250   119
ATOM   1385 CZ   PHE 201 9.755   15.606  70.265 1.000 29.78
ANISOU 1385 CZ   PHE 201 3705      3397      4211        6  -638  -849
ATOM   1386 N    VAL 202 11.706  19.751  69.144 1.000 23.51
ANISOU 1386 N    VAL 202 2671      3392      2868     -292    -1  -578
ATOM   1387 CA   VAL 202 11.969  19.626  67.706 1.000 26.37
ANISOU 1387 CA   VAL 202 3025      4050      2946     -667    57  -724
ATOM   1388 C    VAL 202 11.423  18.283  67.198 1.000 22.75
ANISOU 1388 C    VAL 202 2729      3348      2567       96  -120  -435
ATOM   1389 O    VAL 202 11.880  17.190  67.541 1.000 28.71
ANISOU 1389 O    VAL 202 3249      3799      3859      119    31   661
ATOM   1390 CB   VAL 202 13.476  19.721  67.415 1.000 24.99
ANISOU 1390 CB   VAL 202 3060      3427      3008     -278   283   152
ATOM   1391 CG1  VAL 202 13.715  19.464  65.938 1.000 27.70
ANISOU 1391 CG1  VAL 202 4642      2577      3307       87  1014    -3
ATOM   1392 CG2  VAL 202 14.050  21.071  67.823 1.000 26.80
ANISOU 1392 CG2  VAL 202 2826      3868      3487     -490   474  -398
ATOM   1393 N    SER 203 10.405  18.402  66.333 1.000 24.10
ANISOU 1393 N    SER 203 2194      3607      3356      -31  -179  -528
ATOM   1394 CA   SER 203 9.634   17.231  65.940 1.000 23.70
ANISOU 1394 CA   SER 203 2373      3584      3046     -290   308  -533
ATOM   1395 C    SER 203 10.168  16.511  64.710 1.000 21.28
ANISOU 1395 C    SER 203 2173      3041      2871       46   227   -42
ATOM   1396 O    SER 203 10.159  15.285  64.640 1.000 27.60
ANISOU 1396 O    SER 203 4105      3097      3284     -482  1010  -249
ATOM   1397 CB   SER 203 8.148   17.571  65.685 1.000 29.06
ANISOU 1397 CB   SER 203 2251      3790      5001     -180   203 -2064
ATOM   1398 OG   SER 203 7.584   18.175  66.843 1.000 32.55
ANISOU 1398 OG   SER 203 3840      4298      4231      920  1099  -382
ATOM   1399 N    LEU 204 10.688  17.233  63.724 1.000 22.46
ANISOU 1399 N    LEU 204 2476      3013      3043       79   450   -46
ATOM   1400 CA   LEU 204 11.166  16.530  62.544 1.000 20.26
ANISOU 1400 CA   LEU 204 2200      2831      2667       45   -18   -15
ATOM   1401 C    LEU 204 12.595  16.038  62.747 1.000 18.83
ANISOU 1401 C    LEU 204 2151      2528      2477      -75    60    -1
ATOM   1402 O    LEU 204 13.443  16.783  63.251 1.000 20.47
ANISOU 1402 O    LEU 204 2333      2386      3059     -303  -195   404
ATOM   1403 CB   LEU 204 11.103  17.486  61.362 1.000 21.42
ANISOU 1403 CB   LEU 204 2718      2548      2871      311   -16    -8
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- 59 -

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ATOM     1404 CG   LEU  204  9.769   18.188  61.079 1.000 33.57
ANISOU   1404 CG   LEU  204  2820    4319    5617    177   -1316  1172
ATOM     1405 CD1  LEU  204  9.797   18.747  59.660 1.000 36.19
ANISOU   1405 CD1  LEU  204  4402    3807    5540    1276  -1167  987
ATOM     1406 CD2  LEU  204  8.581   17.234  61.219 1.000 37.76
ANISOU   1406 CD2  LEU  204  3058    5328    5960    -526  -1896  686
ATOM     1407 N    GLN  205  12.864  14.836  62.284 1.000 20.33
ANISOU   1407 N    GLN  205  2518    2644    2563    104   -31   -129
ATOM     1408 CA   GLN  205  14.209  14.247  62.335 1.000 18.88
ANISOU   1408 CA   GLN  205  2522    2225    2425    -6    -181  36
ATOM     1409 C    GLN  205  14.512  13.504  61.036 1.000 18.19
ANISOU   1409 C    GLN  205  1986    2383    2543    -143  -188  -80
ATOM     1410 O    GLN  205  13.577  13.033  60.408 1.000 19.87
ANISOU   1410 O    GLN  205  1974    3063    2514    -125  -212  -237
ATOM     1411 CB   GLN  205  14.296  13.267  63.493 1.000 24.25
ANISOU   1411 CB   GLN  205  3948    2716    2548    202   -343  296
ATOM     1412 CG   GLN  205  14.164  13.948  64.856 1.000 30.64
ANISOU   1412 CG   GLN  205  4099    5159    2382    850   -327  -89
ATOM     1413 CD   GLN  205  14.744  13.078  65.948 1.000 28.28
ANISOU   1413 CD   GLN  205  4473    3633    2640    -161  -1015 -390
ATOM     1414 OE1  GLN  205  14.307  11.921  66.041 1.000 37.69
ANISOU   1414 OE1  GLN  205  5733    5073    3515    -2145 -699  478
ATOM     1415 NE2  GLN  205  15.710  13.553  66.711 1.000 40.53
ANISOU   1415 NE2  GLN  205  6798    4417    4185    -1341 -2865 323
ATOM     1416 N    ALA  206  15.752  13.471  60.576 1.000 18.52
ANISOU   1416 N    ALA  206  2070    2199    2769    -240  -13   4
ATOM     1417 CA   ALA  206  16.152  12.700  59.405 1.000 18.42
ANISOU   1417 CA   ALA  206  2074    2351    2575    -100  -158  23
ATOM     1418 C    ALA  206  17.343  11.802  59.738 1.000 17.41
ANISOU   1418 C    ALA  206  2107    2158    2350    -185  -254  -17
ATOM     1419 O    ALA  206  18.123  12.203  60.613 1.000 20.67
ANISOU   1419 O    ALA  206  2469    2410    2973    -48   -711  -396
ATOM     1420 CB   ALA  206  16.637  13.599  58.270 1.000 18.77
ANISOU   1420 CB   ALA  206  2119    2310    2703    156   -65   147
ATOM     1421 N    GLU  207  17.492  10.764  58.931 1.000 18.09
ANISOU   1421 N    GLU  207  2092    2101    2680    -249  -496  -162
ATOM     1422 CA   GLU  207  18.710  9.944   58.966 1.000 19.48
ANISOU   1422 CA   GLU  207  2210    2091    3100    -73   -432  -44
ATOM     1423 C    GLU  207  19.851  10.730  58.320 1.000 19.98
ANISOU   1423 C    GLU  207  2018    2233    3342    220   -560  544
ATOM     1424 O    GLU  207  19.732  11.068  57.143 1.000 20.33
ANISOU   1424 O    GLU  207  2000    2753    2970    5     -471  89
ATOM     1425 CB   GLU  207  18.566  8.623   58.214 1.000 24.03
ANISOU   1425 CB   GLU  207  3401    1784    3946    316   -1226 61
ATOM     1426 CG   GLU  207  19.757  7.674   58.295 1.000 24.35
ANISOU   1426 CG   GLU  207  3223    1907    4121    354   93    467
ATOM     1427 CD   GLU  207  20.730  7.791   57.129 1.000 31.69
ANISOU   1427 CD   GLU  207  2729    5178    4134    -1218 -175  122
ATOM     1428 OE1  GLU  207  20.376  7.611   55.943 1.000 26.97
ANISOU   1428 OE1  GLU  207  2849    3404    3993    31    -256  309
ATOM     1429 OE2  GLU  207  21.908  8.121   57.407 1.000 30.70
ANISOU   1429 OE2  GLU  207  2484    3416    5764    -233  -342  -1168
ATOM     1430 N    VAL  208  20.919  10.936  59.078 1.000 18.53
ANISOU   1430 N    VAL  208  2020    2112    2907    130   -362  320
ATOM     1431 CA   VAL  208  22.150  11.547  58.541 1.000 19.53
ANISOU   1431 CA   VAL  208  2044    2238    3137    39    -476  630
ATOM     1432 C    VAL  208  23.341  10.755  59.088 1.000 21.95
ANISOU   1432 C    VAL  208  2040    2792    3507    225   -461  797
ATOM     1433 O    VAL  208  23.460  10.663  60.314 1.000 23.82
ANISOU   1433 O    VAL  208  2262    3240    3547    -40   -858  825
ATOM     1434 CB   VAL  208  22.271  13.027  58.905 1.000 19.72
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ANISOU 1434 CB  VAL  208 1918    2429    3145    -47   -308 3 1 1
ATOM   1435 CG1 VAL  208 23.524 13.626 58.281 1.000 23.14
ANISOU 1435 CG1 VAL  208 2524    2374    3895   -202   284  3 4 9
ATOM   1436 CG2 VAL  208 21.030 13.812 58.469 1.000 19.47
ANISOU 1436 CG2 VAL  208 2462    2279    2658    232   -667 - 8 7
ATOM   1437 N   GLY  209 24.180 10.169 58.246 1.000 23.88
ANISOU 1437 N   GLY  209 2500    2449    4123    465   -711 3 6
ATOM   1438 CA  GLY  209 25.306  9.374 58.773 1.000 26.42
ANISOU 1438 CA  GLY  209 1987    3599    4450·;  460   -487 5 1 6
ATOM   1439 C   GLY  209 24.905  8.250 59.695 1.000 30.01
ANISOU 1439 C   GLY  209 3469    3240    4693    238   -1422  7 3 2
ATOM   1440 O   GLY  209 25.609  7.835 60.629 1.000 31.45
ANISOU 1440 O   GLY  209 4053    4458    3438   1225   -897 8 3
ATOM   1441 N   GLY  210 23.691  7.702 59.523 1.000 26.64
ANISOU 1441 N   GLY  210 3165    3214    3744    259   -86  3 5 0
ATOM   1442 CA  GLY  210 23.263  6.585 60.360 1.000 29.78
ANISOU 1442 CA  GLY  210 4603    3091    3619    -55   -997 5 8 4
ATOM   1443 C   GLY  210 22.622  6.993 61.663 1.000 38.28
ANISOU 1443 C   GLY  210 5827    4212    4507   -2536  732  5 0
ATOM   1444 O   GLY  210 22.160  6.187 62.481 1.000 41.45
ANISOU 1444 O   GLY  210 4152    6516    5082   -1874  -567 2346
ATOM   1445 N   ALA  211 22.512  8.274 61.976 1.000 32.81
ANISOU 1445 N   ALA  211 4803    4625    3037   1372   -1177  6 3 2
ATOM   1446 CA  ALA  211 21.828  8.603 63.235 1.000 35.62
ANISOU 1446 CA  ALA  211 3993    5958    3584   1061   -610 9 7 0
ATOM   1447 C   ALA  211 20.663  9.543 62.940 1.000 31.43
ANISOU 1447 C   ALA  211 3508    4737    3699    302   69 1 8 5 4
ATOM   1448 O   ALA  211 20.652 10.097 61.858 1.000 28.28
ANISOU 1448 O   ALA  211 3661    4062    3020   -571   -551 1010
ATOM   1449 CB  ALA  211 22.812  9.278 64.170 1.000 41.36
ANISOU 1449 CB  ALA  211 3644    8904    3169   1372   -18  - 7 9 1
ATOM   1450 N   PHE  212 19.682  9.676 63.825 1.000 36.68
ANISOU 1450 N   PHE  212 5211    4237    4489   1166   1265 2171
ATOM   1451 CA  PHE  212 18.620 10.654 63.641 1.000 28.82
ANISOU 1451 CA  PHE  212 4490    3167    3293    263   504  1 0 3 7
ATOM   1452 C   PHE  212 19.100 12.023 64.124 1.000 34.72
ANISOU 1452 C   PHE  212 6746    3760    2685   -248   -539 7 7 6
ATOM   1453 O   PHE  212 19.667 12.191 65.210 1.000 39.12
ANISOU 1453 O   PHE  212 6144    5384    3335   -549   -1129 1 2 2 0
ATOM   1454 CB  PHE  212 17.358 10.219 64.388 1.000 45.35
ANISOU 1454 CB  PHE  212 6376    2569    8288   1348   3748 2314
ATOM   1455 N   THR  213 18.906 13.008 63.271 1.000 26.30
ANISOU 1455 N   THR  213 4134    2738    3122    662   -581 1 0 0
ATOM   1456 CA  THR  213 19.424 14.359 63.433 1.000 25.08
ANISOU 1456 CA  THR  213 3587    2852    3089    767   -810 - 3 2 3
ATOM   1457 C   THR  213 18.190 15.283 63.400 1.000 23.81
ANISOU 1457 C   THR  213 2835    2652    3560    215   -855 - 6 4 3
ATOM   1458 O   THR  213 17.329 15.137 62.517 1.000 21.40
ANISOU 1458 O   THR  213 2640    2269    3223   -328   -580 - 1 7 9
ATOM   1459 CB  THR  213 20.398 14.759 62.308 1.000 27.60
ANISOU 1459 CB  THR  213 3155    3220    4113    189   -356 - 7 9 8
ATOM   1460 OG1 THR  213 21.673 14.084 62.374 1.000 32.00
ANISOU 1460 OG1 THR  213 3582    4220    4356    746   -410 5 2 0
ATOM   1461 CG2 THR  213 20.735 16.254 62.355 1.000 29.45
ANISOU 1461 CG2 THR  213 4422    3320    3448   -106   -1265 - 2 0 4
ATOM   1462 N   ASP  214 18.119 16.177 64.371 1.000 21.05
ANISOU 1462 N   ASP  214 2790    2236    2972    -82   -380 - 1 4 2
ATOM   1463 CA  ASP  214 17.001 17.110 64.462 1.000 20.61
ANISOU 1463 CA  ASP  214 2742    2095    2993   -117   -898 - 3 7 9
ATOM   1464 C   ASP  214 16.994 18.030 63.226 1.000 20.58
ANISOU 1464 C   ASP  214 2373    2525    2923    182   -169 - 2 3 7
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ATOM    1465 O    ASP  214 18.018  18.430  62.678 1.000 23.02
ANISOU  1465 O    ASP  214 2461    2883    3404   -167 -52  -572
ATOM    1466 CB   ASP  214 17.205  18.058  65.637 1.000 23.54
ANISOU  1466 CB   ASP  214 3304    2607    3032   -92  -748 -668
ATOM    1467 CG   ASP  214 16.915  17.506  67.004 1.000 24.93
ANISOU  1467 CG   ASP  214 3545    2850    3079   450  -417 -614
ATOM    1468 OD1  ASP  214 16.357  16.395  67.113 1.000 29.17
ANISOU  1468 OD1  ASP  214 4134    3070    3878   202  -705 262
ATOM    1469 OD2  ASP  214 17.276  18.191  67.990 1.000 34.38
ANISOU  1469 OD2  ASP  214 6917    3040    3107   1017 -1413 -736
ATOM    1470 N    LEU  215 15.802  18.452  62.859 1.000 20.74
ANISOU  1470 N    LEU  215 2426    2372    3081   86   -60 306
ATOM    1471 CA   LEU  215 15.568  19.401  61.796 1.000 20.55
ANISOU  1471 CA   LEU  215 2895    2013    2899   -202 -178 141
ATOM    1472 C    LEU  215 14.724  20.552  62.332 1.000 19.02
ANISOU  1472 C    LEU  215 2482    2240    2504   -142 -34  321
ATOM    1473 O    LEU  215 13.510  20.613  62.142 1.000 22.39
ANISOU  1473 O    LEU  215 2635    2483    3389   -160 -475 573
ATOM    1474 CB   LEU  215 14.826  18.722  60.650 1.000 22.04
ANISOU  1474 CB   LEU  215 2778    2510    3086   -140 -261 -65
ATOM    1475 CG   LEU  215 15.598  17.502  60.128 1.000 25.25
ANISOU  1475 CG   LEU  215 3680    2829    3085   85   -166 -402
ATOM    1476 CD1  LEU  215 14.680  16.736  59.174 1.000 27.12
ANISOU  1476 CD1  LEU  215 4886    2934    2482   419  -1128 -65
ATOM    1477 CD2  LEU  215 16.881  18.046  59.510 1.000 30.76
ANISOU  1477 CD2  LEU  215 3434    3089    5165   1003 524  561
ATOM    1478 N    PRO  216 15.383  21.433  63.078 1.000 19.68
ANISOU  1478 N    PRO  216 2407    2191    2879   -157 148  103
ATOM    1479 CA   PRO  216 14.665  22.534  63.708 1.000 22.42
ANISOU  1479 CA   PRO  216 2869    2812    2836   272  10  -228
ATOM    1480 C    PRO  216 14.201  23.576  62.698 1.000 25.36
ANISOU  1480 C    PRO  216 4118    2433    3086   566  -131 -315
ATOM    1481 O    PRO  216 14.700  23.759  61.586 1.000 24.67
ANISOU  1481 O    PRO  216 3682    2406    3284   187  -176 -26
ATOM    1482 CB   PRO  216 15.693  23.092  64.676 1.000 23.88
ANISOU  1482 CB   PRO  216 3108    3049    2917   -216 116  -318
ATOM    1483 CG   PRO  216 17.033  22.701  64.146 1.000 28.31
ANISOU  1483 CG   PRO  216 2994    2996    4766   -88  -117 -1454
ATOM    1484 CD   PRO  216 16.807  21.405  63.436 1.000 24.55
ANISOU  1484 CD   PRO  216 2353    1777    5197   -436 -83  -348
ATOM    1485 N    TYR  217 13.154  24.287  63.102 1.000 24.13
ANISOU  1485 N    TYR  217 3237    2704    3229   244  -631 -511
ATOM    1486 CA   TYR  217 12.676  25.510  62.462 1.000 26.08
ANISOU  1486 CA   TYR  217 2514    2899    4498   104  -592 39
ATOM    1487 C    TYR  217 13.824  26.516  62.369 1.000 25.24
ANISOU  1487 C    TYR  217 3049    2948    3592   -257 -506 -538
ATOM    1488 O    TYR  217 14.570  26.675  63.340 1.000 31.78
ANISOU  1488 O    TYR  217 4114    2863    5096   -352 -2151 564
ATOM    1489 CB   TYR  217 11.559  26.103  63.315 1.000 25.97
ANISOU  1489 CB   TYR  217 2747    2773    4346   86   -615 -167
ATOM    1490 CG   TYR  217 11.189  27.543  63.125 1.000 31.64
ANISOU  1490 CG   TYR  217 3080    2803    6139   338  -1473 -644
ATOM    1491 CD1  TYR  217 10.430  27.928  62.022 1.000 27.85
ANISOU  1491 CD1  TYR  217 2238    3029    5314   511  -175 93
ATOM    1492 CD2  TYR  217 11.512  28.522  64.069 1.000 38.49
ANISOU  1492 CD2  TYR  217 4721    2813    7093   -686 -1682 -749
ATOM    1493 CE1  TYR  217 10.021  29.219  61.772 1.000 26.53
ANISOU  1493 CE1  TYR  217 1908    2675    5496   -41  107  69
ATOM    1494 CE2  TYR  217 11.113  29.835  63.827 1.000 42.90
ANISOU  1494 CE2  TYR  217 7112    2347    6842   -1415 -1949 -218
ATOM    1495 CZ   TYR  217 10.373  30.168  62.712 1.000 34.93
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ANISOU 1495 CZ   TYR  217 4042      2747      6483      -1462 -545 1 6 6
ATOM   1496 OH   TYR  217 9.996     31.486    62.473 1.000 36.41
ANISOU 1496 OH   TYR  217 5499      2895      5439      -753  -250 -2 8 9
ATOM   1497 N    ARG  218 14.022    27.110    61.218 1.000 25.58
ANISOU 1497 N    ARG  218 3461      2406      3852      -227  -533 - 4 7 6
ATOM   1498 CA   ARG  218 14.923    28.243    61.049 1.000 29.26
ANISOU 1498 CA   ARG  218 3630      3270      4219      -784  -1349  2 6 8
ATOM   1499 C    ARG  218 14.113    29.336    60.366 1.000 24.81
ANISOU 1499 C    ARG  218 4063      2949      2415      -382  -228 - 5 6
ATOM   1500 O    ARG  218 13.746    29.174    59.212 1.000 29.56
ANISOU 1500 O    ARG  218 6298      2267      2666      -890  -994 1 6 5
ATOM   1501 CB   ARG  218 16.162    27.823    60.256 1.000 35.90
ANISOU 1501 CB   ARG  218 3223      3685      6732      -624  -703 8 9 6
ATOM   1502 CG   ARG  218 17.369    28.665    60.661 1.000 51.38
ANISOU 1502 CG   ARG  218 4740      6768      8015      -3031 430  - 1 8 3
ATOM   1503 CD   ARG  218 18.539    28.606    59.701 1.000 38.84
ANISOU 1503 CD   ARG  218 4968      6308      3482      -3596 -1165  1 6 4 7
ATOM   1504 NE   ARG  218 19.343    27.395    59.905 1.000 45.09
ANISOU 1504 NE   ARG  218 4655      7495      4982      -2325 -962 - 9 4
ATOM   1505 CZ   ARG  218 20.272    27.208    58.959 1.000 55.53
ANISOU 1505 CZ   ARG  218 5299      11458     4340      -2701 -1188  -1 9 4 8
ATOM   1506 NH1  ARG  218 20.289    28.158    58.031 1.000 60.85
ANISOU 1506 NH1  ARG  218 2399      16648     4071      -1943 -1333 5 4 8
ATOM   1507 NH2  ARG  218 21.060    26.165    59.001 1.000 60.37
ANISOU 1507 NH2  ARG  218 8580      10111     4247      -2152 639   - 4 2 4 1
ATOM   1508 N    PRO  219 13.871    30.496    60.972 1.000 25.89
ANISOU 1508 N    PRO  219 2625      4126      3086      35 296 -1 0 1 4
ATOM   1509 CA   PRO  219 13.065    31.548    60.326 1.000 28.10
ANISOU 1509 CA   PRO  219 2828      3120      4730      -410  379   - 6 9 6
ATOM   1510 C    PRO  219 13.636    31.959    58.981 1.000 28.43
ANISOU 1510 C    PRO  219 3141      3010      4653      -190  116   - 3 2 8
ATOM   1511 O    PRO  219 12.904    32.393    58.081 1.000 34.17
ANISOU 1511 O    PRO  219 4734      3500      4750      302   -798 - 8 9 3
ATOM   1512 CB   PRO  219 13.115    32.717    61.316 1.000 39.70
ANISOU 1512 CB   PRO  219 5621      3612      5852      -500  1615 -1 5 2 7
ATOM   1513 CG   PRO  219 13.368    32.033    62.628 1.000 42.38
ANISOU 1513 CG   PRO  219 6139      5277      4688      -257  2084 -2 0 8 6
ATOM   1514 CD   PRO  219 14.370    30.943    62.289 1.000 32.77
ANISOU 1514 CD   PRO  219 3901      5719      2831      -602  828   -1 6 0 3
ATOM   1515 N    ASP  220 14.950    31.824    58.811 1.000 25.65
ANISOU 1515 N    ASP  220 3328      1582      4837      -276  801   - 8 7 8
ATOM   1516 CA   ASP  220 15.590    32.280    57.587 1.000 26.45
ANISOU 1516 CA   ASP  220 3594      2115      4341      -782  248   - 8 6 1
ATOM   1517 C    ASP  220 15.781    31.305    56.451 1.000 28.46
ANISOU 1517 C    ASP  220 3549      1843      5423      -111  1638 - 9 4 3
ATOM   1518 O    ASP  220 16.432    31.620    55.433 1.000 25.80
ANISOU 1518 O    ASP  220 3249      2021      4533      -140  623   - 4 1 2
ATOM   1519 CB   ASP  220 16.911    32.962    57.998 1.000 33.76
ANISOU 1519 CB   ASP  220 2351      3539      6938      -445  1187 -1 7 2 4
ATOM   1520 CG   ASP  220 17.882    31.913    58.502 1.000 42.36
ANISOU 1520 CG   ASP  220 2653      3531      9912      -812  230   - 9 5 7
ATOM   1521 OD1  ASP  220 17.484    31.170    59.423 1.000 37.00
ANISOU 1521 OD1  ASP  220 3154      4148      6757      -104  -410 -2 0 0 1
ATOM   1522 OD2  ASP  220 18.981    31.787    57.957 1.000 37.34
ANISOU 1522 OD2  ASP  220 2520      4700      6969      93 -824   - 1 2 6 6
ATOM   1523 N    ALA  221 15.292    30.072    56.537 1.000 24.79
ANISOU 1523 N    ALA  221 4148      1872      3398      -252  671   - 6 5 9
ATOM   1524 CA   ALA  221 15.695    29.016    55.596 1.000 19.17
ANISOU 1524 CA   ALA  221 2165      1868      3251      -52   -92   - 6 1 0
ATOM   1525 C    ALA  221 14.551    27.996    55.479 1.000 18.60
ANISOU 1525 C    ALA  221 1920      2238      2908      -82   -207 -3 6 2
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ATOM    1526 O    ALA  221 13.763  27.852  56.415 1.000 26.47
ANISOU  1526 O    ALA  221 4127     2641    3289  -1307  894  -904
ATOM    1527 CB   ALA  221 16.939  28.316  56.104 1.000 19.36
ANISOU  1527 CB   ALA  221 2054     2333    2969  -537  -316 6 6
ATOM    1528 N    VAL  222 14.490  27.385  54.313 1.000 17.35
ANISOU  1528 N    VAL  222 2089     1841    2661  -101  -323 -154
ATOM    1529 CA   VAL  222 13.556  26.276  54.083 1.000 17.45
ANISOU  1529 CA   VAL  222 1620     2004    3004  -66   -417 1 9
ATOM    1530 C    VAL  222 14.333  24.965  54.077 1.000 15.69
ANISOU  1530 C    VAL  222 1616     1876    2471  -269  -349 -324
ATOM    1531 O    VAL  222 15.512  24.934  53.716 1.000 17.84
ANISOU  1531 O    VAL  222 1658     1730    3390  -108  -194 4 8
ATOM    1532 CB   VAL  222 12.822  26.433  52.747 1.000 19.60
ANISOU  1532 CB   VAL  222 2267     2202    2979   91 -666  -3 0 4
ATOM    1533 CG1  VAL  222 13.781  26.363  51.563 1.000 21.96
ANISOU  1533 CG1  VAL  222 2252     3113    2977  250   -645 -182
ATOM    1534 CG2  VAL  222 11.730  25.411  52.490 1.000 22.44
ANISOU  1534 CG2  VAL  222 2923     2537    3067  -497  -898 4 4
ATOM    1535 N    LEU  223 13.789  23.892  54.621 1.000 16.30
ANISOU  1535 N    LEU  223 1792     1694    2706  -239  -93  -532
ATOM    1536 CA   LEU  223 14.407  22.575  54.579 1.000 15.91
ANISOU  1536 CA   LEU  223 1679     1864    2503  -93   -297 -333
ATOM    1537 C    LEU  223 14.114  21.908  53.243 1.000 14.86
ANISOU  1537 C    LEU  223 1337     1537    2773  -141  -322 -458
ATOM    1538 O    LEU  223 12.969  21.888  52.766 1.000 16.23
ANISOU  1538 O    LEU  223 1317     2132    2719   70 -391  -2 81
ATOM    1539 CB   LEU  223 13.829  21.779  55.761 1.000 19.97
ANISOU  1539 CB   LEU  223 2740     1945    2901  -121  205  -212
ATOM    1540 CG   LEU  223 14.298  20.348  55.882 1.000 23.01
ANISOU  1540 CG   LEU  223 2668     1871    4205  -375  -170 9 1
ATOM    1541 CD1  LEU  223 15.797  20.322  56.143 1.000 23.73
ANISOU  1541 CD1  LEU  223 2570     3067    3378   69 135 3 16
ATOM    1542 CD2  LEU  223 13.492  19.668  56.979 1.000 35.71
ANISOU  1542 CD2  LEU  223 2813     3296    7459  525   1116 2 3 3
ATOM    1543 N    VAL  224 15.115  21.370  52.570 1.000 14.18
ANISOU  1543 N    VAL  224 1383     1446    2560  -28   -320 -2 0 5
ATOM    1544 CA   VAL  224 14.956  20.627  51.330 1.000 14.52
ANISOU  1544 CA   VAL  224 1585     1501    2431  -23   -323 -127
ATOM    1545 C    VAL  224 15.320  19.160  51.561 1.000 13.59
ANISOU  1545 C    VAL  224 1464     1522    2178   23 -290  -2 51
ATOM    1546 O    VAL  224 16.442  18.861  51.981 1.000 15.38
ANISOU  1546 O    VAL  224 1464     1558    2822   0   -505  -3 74
ATOM    1547 CB   VAL  224 15.832  21.209  50.222 1.000 14.25
ANISOU  1547 CB   VAL  224 1402     1606    2407  -60   -461 -1 0 8
ATOM    1548 CG1  VAL  224 15.685  20.443  48.906 1.000 16.63
ANISOU  1548 CG1  VAL  224 1682     2164    2474  -159  -408 -4 21
ATOM    1549 CG2  VAL  224 15.575  22.687  50.040 1.000 16.40
ANISOU  1549 CG2  VAL  224 1807     1562    2863   6   -509 8 7
ATOM    1550 N    PHE  225 14.340  18.299  51.299 1.000 13.49
ANISOU  1550 N    PHE  225 1494     1526    2106  -66   -353 -1 3 0
ATOM    1551 CA   PHE  225 14.647  16.882  51.162 1.000 14.67
ANISOU  1551 CA   PHE  225 1639     1505    2431  -115  -61  -2 83
ATOM    1552 C    PHE  225 14.756  16.533  49.675 1.000 14.27
ANISOU  1552 C    PHE  225 1536     1533    2352  100   -260 -194
ATOM    1553 O    PHE  225 13.858  16.876  48.893 1.000 16.25
ANISOU  1553 O    PHE  225 1604     2000    2569  296   -311 -8 8
ATOM    1554 CB   PHE  225 13.537  15.999  51.749 1.000 15.57
ANISOU  1554 CB   PHE  225 1613     1563    2740  -25   -46  2 4
ATOM    1555 CG   PHE  225 13.387  15.996  53.257 1.000 17.95
ANISOU  1555 CG   PHE  225 1888     2267    2666  -650  -302 2 03
ATOM    1556 CD1  PHE  225 14.409  15.809  54.157 1.000 27.39
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ANISOU 1556 CD1 PHE  225 2740      4234      3431    -910   -1094  9 0 0
ATOM   1557 CD2 PHE  225 12.125  15.863  53.820 1.000 21.09
ANISOU 1557 CD2 PHE  225 2333      2765      2917    -166    399   - 5 2 7
ATOM   1558 CE1 PHE  225 14.211  15.673  55.521 1.000 26.82
ANISOU 1558 CE1 PHE  225 3108      3657      3424   -1044  -1241  1 1 2 8
ATOM   1559 CE2 PHE  225 11.910  15.910  55.186 1.000 21.65
ANISOU 1559 CE2 PHE  225 2994      2414      2817     623    239   - 3 9
ATOM   1560 CZ  PHE  225 12.958  15.787  56.078 1.000 28.82
ANISOU 1560 CZ  PHE  225 3705      3716      3531    -832   -663 3 4 0
ATOM   1561 N   CYS  226 15.795  15.817  49.266 1.000 12.77
ANISOU 1561 N   CYS  226 1428      1292      2131     -60   -370 - 2 3 9
ATOM   1562 CA  CYS  226 15.810  15.180  47.956 1.000 12.99
ANISOU 1562 CA  CYS  226 1360      1440      2135      12   -355  - 2 0 7
ATOM   1563 C   CYS  226 14.903  13.956  47.985 1.000 12.37
ANISOU 1563 C   CYS  226 1533      1212      1955       8   -283  - 3 1 1
ATOM   1564 O   CYS  226 14.961  13.217  48.974 1.000 15.68
ANISOU 1564 O   CYS  226 1885      1651      2424    -140   -611 1 5 8
ATOM   1565 CB  CYS  226 17.228  14.855  47.527 1.000 13.77
ANISOU 1565 CB  CYS  226 1410      1627      2193      19   -203  - 7 5
ATOM   1566 SG  CYS  226 18.224  16.367  47.314 1.000 16.37
ANISOU 1566 SG  CYS  226 1744      1740      2735    -222   -236 - 1 2
ATOM   1567 N   GLY  227 14.150  13.722  46.928 1.000 13.20
ANISOU 1567 N   GLY  227 1388      1513      2113     -28   -293 - 2 9 0
ATOM   1568 CA  GLY  227 13.352  12.496  46.899 1.000 12.58
ANISOU 1568 CA  GLY  227 1279      1631      1872     -83   -438 - 2 5 5
ATOM   1569 C   GLY  227 13.903  11.541  45.849 1.000 12.54
ANISOU 1569 C   GLY  227 1518      1279      1965      15   -288  - 7 9
ATOM   1570 O   GLY  227 14.917  11.732  45.152 1.000 13.58
ANISOU 1570 O   GLY  227 1630      1523      2008      51   -155  8 2
ATOM   1571 N   ALA  228 13.212  10.400  45.712 1.000 13.02
ANISOU 1571 N   ALA  228 1490      1306      2151      59   -204  - 1 6 1
ATOM   1572 CA  ALA  228 13.663   9.321  44.860 1.000 12.41
ANISOU 1572 CA  ALA  228 1649      1155      1912     -68   -119 - 6 3
ATOM   1573 C   ALA  228 13.706   9.727  43.404 1.000 12.82
ANISOU 1573 C   ALA  228 1566      1288      2016      97   -223  - 5
ATOM   1574 O   ALA  228 14.482   9.132  42.651 1.000 13.64
ANISOU 1574 O   ALA  228 1717      1462      2004      26   -6 - 1 3 1
ATOM   1575 CB  ALA  228 12.714   8.121  45.058 1.000 14.56
ANISOU 1575 CB  ALA  228 1808      1366      2356    -219    358   - 2 4 3
ATOM   1576 N   ILE  229 12.909  10.695  42.952 1.000 13.61
ANISOU 1576 N   ILE  229 1340      1391      2441     -43   -289 2 7 3
ATOM   1577 CA  ILE  229 13.024  11.131  41.566 1.000 12.93
ANISOU 1577 CA  ILE  229 1325      1243      2344     -42   -306 1 7 3
ATOM   1578 C   ILE  229 14.342  11.864  41.358 1.000 13.17
ANISOU 1578 C   ILE  229 1327      1364      2311     -47   -191 1 3 0
ATOM   1579 O   ILE  229 14.938  11.746  40.262 1.000 14.41
ANISOU 1579 O   ILE  229 1587      1596      2293     -37   -167 1 8 3
ATOM   1580 CB  ILE  229 11.768  11.888  41.103 1.000 13.46
ANISOU 1580 CB  ILE  229 1470      1631      2015     171   -354 - 4 2
ATOM   1581 CG1 ILE  229 10.599  10.920  40.973 1.000 15.72
ANISOU 1581 CG1 ILE  229 1218      1936      2817      85  31 1 1 8
ATOM   1582 CG2 ILE  229 12.040  12.674  39.808 1.000 14.19
ANISOU 1582 CG2 ILE  229 1670      1425      2298      76   -364  1 7 4
ATOM   1583 CD1 ILE  229 10.745   9.924  39.836 1.000 20.03
ANISOU 1583 CD1 ILE  229 2129      1814      3667    -208   -385 - 4 8 8
ATOM   1584 N   ALA  230 14.877  12.575  42.353 1.000 13.38
ANISOU 1584 N   ALA  230 1252      1378      2454     -97   -176 7 4
ATOM   1585 CA  ALA  230 16.209  13.185  42.130 1.000 12.30
ANISOU 1585 CA  ALA  230 1156      1444      2074      66   -97 - 1 0 8
ATOM   1586 C   ALA  230 17.223  12.033  41.976 1.000 12.89
ANISOU 1586 C   ALA  230 1491      1327      2079     128    30 - 2 0
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ATOM    1587 O    ALA   230 18.100  12.091  41.146 1.000 13.65
ANISOU  1587 O    ALA   230 1240    1530    2418   108    4   4  6
ATOM    1588 CB   ALA   230 16.588  14.000  43.345 1.000 13.66
ANISOU  1588 CB   ALA   230 1559    1415    2215  -186  -21  -2 2 9
ATOM    1589 N    THR   231 17.143  10.978  42.805 1.000 13.31
ANISOU  1589 N    THR   231 1526    1318    2214   58 -261   - 1
ATOM    1590 CA   THR   231 18.022  9.815   42.659 1.000 13.32
ANISOU  1590 CA   THR   231 1660    1307    2093   78 -302   3 2
ATOM    1591 C    THR   231 17.906  9.224   41.251 1.000 13.27
ANISOU  1591 C    THR   231 1300    1631    2111   205  -211 3
ATOM    1592 O    THR   231 18.932  8.974   40.620 1.000 15.51
ANISOU  1592 O    THR   231 1468    1759    2667   245   58 -1 7 0
ATOM    1593 CB   THR   231 17.656  8.751   43.688 1.000 13.03
ANISOU  1593 CB   THR   231 1500    1302    2151   46 -166   1 2
ATOM    1594 OG1  THR   231 17.530  9.313   44.995 1.000 14.70
ANISOU  1594 OG1  THR   231 1742    1614    2230  -99   32  - 1 4
ATOM    1595 CG2  THR   231 18.698  7.621   43.697 1.000 13.69
ANISOU  1595 CG2  THR   231 1449    1419    2335   113  -211 19 7
ATOM    1596 N    LEU   232 16.665  9.049   40.796 1.000 13.43
ANISOU  1596 N    LEU   232 1447    1384    2271   75 -404   - 2 7
ATOM    1597 CA   LEU   232 16.446  8.396   39.527 1.000 14.11
ANISOU  1597 CA   LEU   232 1809    1226    2326   80 -468   4 9
ATOM    1598 C    LEU   232 16.975  9.248   38.381 1.000 15.53
ANISOU  1598 C    LEU   232 1968    1557    2376   209   - 3 9 0
ATOM    1599 O    LEU   232 17.749  8.808   37.504 1.000 17.16
ANISOU  1599 O    LEU   232 2024    1949    2546   107   -116 -5 1 9
ATOM    1600 CB   LEU   232 14.940  8.135   39.368 1.000 14.47
ANISOU  1600 CB   LEU   232 1692    1630    2175   72 -396   - 1 6 1
ATOM    1601 CG   LEU   232 14.525  7.307   38.155 1.000 15.89
ANISOU  1601 CG   LEU   232 1941    1768    2329   120   -470 -3 0 3
ATOM    1602 CD1  LEU   232 15.118  5.920   38.202 1.000 23.19
ANISOU  1602 CD1  LEU   232 3565    2020    3228   743   -1110 - 8 5 1
ATOM    1603 CD2  LEU   232 13.003  7.190   38.126 1.000 19.46
ANISOU  1603 CD2  LEU   232 2006    2262    3126  -470  -523 - 6 6
ATOM    1604 N    VAL   233 16.539  10.514  38.299 1.000 13.73
ANISOU  1604 N    VAL   233 1736    1454    2025   -7 -263  19 3
ATOM    1605 CA   VAL   233 16.893  11.317  37.117 1.000 13.84
ANISOU  1605 CA   VAL   233 1674    1658    1926   141   -73  1 0 7
ATOM    1606 C    VAL   233 18.407  11.510  37.025 1.000 14.08
ANISOU  1606 C    VAL   233 1716    1674    1958   72 -46 11 3
ATOM    1607 O    VAL   233 18.940  11.587  35.910 1.000 16.65
ANISOU  1607 O    VAL   233 1923    2325    2079   38 109 40 1
ATOM    1608 CB   VAL   233 16.098  12.626  37.062 1.000 14.69
ANISOU  1608 CB   VAL   233 1680    1696    2206   141   -165 3 3 3
ATOM    1609 CG1  VAL   233 16.529  13.650  38.113 1.000 15.70
ANISOU  1609 CG1  VAL   233 1615    1654    2698   34 156  - 2 8
ATOM    1610 CG2  VAL   233 16.117  13.206  35.647 1.000 16.43
ANISOU  1610 CG2  VAL   233 1740    2041    2459   251   117  5 9 6
ATOM    1611 N    THR   234 19.100  11.594  38.175 1.000 14.23
ANISOU  1611 N    THR   234 1599    1724    2083   146   -110 23 5
ATOM    1612 CA   THR   234 20.524  11.908  38.148 1.000 16.14
ANISOU  1612 CA   THR   234 1664    1868    2602   63 -171   - 4 9
ATOM    1613 C    THR   234 21.346  10.621  38.006 1.000 17.09
ANISOU  1613 C    THR   234 1717    1865    2912   146   211   - 5 1
ATOM    1614 O    THR   234 22.558  10.644  38.139 1.000 17.25
ANISOU  1614 O    THR   234 1776    1951    2828   108   200  2 2 9
ATOM    1615 CB   THR   234 21.030  12.681  39.373 1.000 15.29
ANISOU  1615 CB   THR   234 1667    1502    2642  -46  -149 16 3
ATOM    1616 OG1  THR   234 20.849  11.819  40.522 1.000 15.45
ANISOU  1616 OG1  THR   234 1659    1708    2502  -80   59  4 4
ATOM    1617 CG2  THR   234 20.291  13.978  39.597 1.000 16.61
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ANISOU 1617 CG2 THR 234 1564    1672    3077    3   -34 -42
ATOM   1618 N   GLY 235 20.712  9.441   37.833 1.000 16.80
ANISOU 1618 N   GLY 235 1905    1914    2564    193 29 -219
ATOM   1619 CA  GLY 235 21.484  8.209   37.792 1.000 17.10
ANISOU 1619 CA  GLY 235 2049    1861    2586    133 223  -488
ATOM   1620 C   GLY 235 22.225  7.931   39.083 1.000 18.06
ANISOU 1620 C   GLY 235 2046    2049    2768    419 499  303
ATOM   1621 O   GLY 235 23.285  7.289   39.010 1.000 21.26
ANISOU 1621 O   GLY 235 2167    2606    3303    679 343  -74
ATOM   1622 N   GLY 236 21.602  8.149   40.237 1.000 16.17
ANISOU 1622 N   GLY 236 1663    1901    2582    36 291 305
ATOM   1623 CA  GLY 236 22.080  7.673   41.520 1.000 17.27
ANISOU 1623 CA  GLY 236 2135    1671    2754    225 28 229
ATOM   1624 C   GLY 236 23.033  8.639   42.194 1.000 16.88
ANISOU 1624 C   GLY 236 1880    1890    2644    204 100 222
ATOM   1625 O   GLY 236 23.692  8.272   43.193 1.000 19.42
ANISOU 1625 O   GLY 236 2165    2399    2814    314 -90 419
ATOM   1626 N   GLN 237 23.134  9.890   41.746 1.000 16.99
ANISOU 1626 N   GLN 237 1647    1851    2957    213 -213 167
ATOM   1627 CA  GLN 237 24.074  10.849  42.298 1.000 16.75
ANISOU 1627 CA  GLN 237 1608    2004    2752    72 177 9 8
ATOM   1628 C   GLN 237 23.481  11.604  43.483 1.000 15.64
ANISOU 1628 C   GLN 237 1404    2136    2402    231 -146 200
ATOM   1629 O   GLN 237 24.183  12.382  44.164 1.000 18.17
ANISOU 1629 O   GLN 237 1581    2508    2817    -227 -6 -46
ATOM   1630 CB  GLN 237 24.456  11.855  41.217 1.000 17.17
ANISOU 1630 CB  GLN 237 1912    2080    2532    71 141 -7
ATOM   1631 CG  GLN 237 25.304  11.221  40.115 1.000 17.64
ANISOU 1631 CG  GLN 237 1850    2410    2441    226 95 -30
ATOM   1632 CD  GLN 237 25.721  12.302  39.137 1.000 19.72
ANISOU 1632 CD  GLN 237 1680    2833    2979    104 317 307
ATOM   1633 OE1 GLN 237 26.602  13.110  39.436 1.000 24.27
ANISOU 1633 OE1 GLN 237 1841    3145    4234    -213 -187 809
ATOM   1634 NE2 GLN 237 24.986  12.399  38.027 1.000 18.53
ANISOU 1634 NE2 GLN 237 2007    2298    2735    432 374 202
ATOM   1635 N   VAL 238 22.221  11.359  43.807 1.000 14.75
ANISOU 1635 N   VAL 238 1563    1804    2237    -32 -54 4 3
ATOM   1636 CA  VAL 238 21.533  12.075  44.862 1.000 14.41
ANISOU 1636 CA  VAL 238 1535    1553    2388    0 -44 3 2
ATOM   1637 C   VAL 238 20.861  11.060  45.781 1.000 13.56
ANISOU 1637 C   VAL 238 1414    1392    2346    82 55 -149
ATOM   1638 O   VAL 238 20.136  10.174  45.302 1.000 15.87
ANISOU 1638 O   VAL 238 1655    1639    2737    -218 -285 -22
ATOM   1639 CB  VAL 238 20.467  13.061  44.309 1.000 14.73
ANISOU 1639 CB  VAL 238 1817    1626    2152    35 -437 -95
ATOM   1640 CG1 VAL 238 19.805  13.764  45.489 1.000 15.70
ANISOU 1640 CG1 VAL 238 1965    1490    2510    174 -524 -423
ATOM   1641 CG2 VAL 238 21.064  13.994  43.280 1.000 16.82
ANISOU 1641 CG2 VAL 238 1862    1718    2812    -60 -378 222
ATOM   1642 N   LYS 239 21.119  11.153  47.071 1.000 14.47
ANISOU 1642 N   LYS 239 1704    1474    2318    14 -40 1 2
ATOM   1643 CA  LYS 239 20.470  10.360  48.104 1.000 14.43
ANISOU 1643 CA  LYS 239 1460    1617    2406    106 -168 179
ATOM   1644 C   LYS 239 19.048  10.852  48.409 1.000 14.82
ANISOU 1644 C   LYS 239 1533    1456    2642    102 -53 232
ATOM   1645 O   LYS 239 18.839  12.067  48.457 1.000 14.74
ANISOU 1645 O   LYS 239 1841    1442    2318    158 -275 190
ATOM   1646 CB  LYS 239 21.320  10.435  49.385 1.000 16.40
ANISOU 1646 CB  LYS 239 1995    1712    2527    243 -543 252
ATOM   1647 CG  LYS 239 20.767  9.549   50.498 1.000 16.65
ANISOU 1647 CG  LYS 239 1954    1759    2614    -58 -781 244
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ATOM   1648 CD  LYS  239 21.738  9.511  51.683 1.000 19.76
ANISOU 1648 CD  LYS  239 2954    1820   2732   -123  -1234  3 6 3
ATOM   1649 CE  LYS  239 21.107  8.835  52.896 1.000 22.58
ANISOU 1649 CE  LYS  239 3331    2164   3086   -652  -1502  8 6 3
ATOM   1650 NZ  LYS  239 21.904  8.883  54.145 1.000 23.13
ANISOU 1650 NZ  LYS  239 2817    3360   2612   -471  -943 2 8 7
ATOM   1651 N   ALA  240 18.140  9.892  48.659 1.000 14.35
ANISOU 1651 N   ALA  240 1429    1607   2418   -156  -334 - 6 1
ATOM   1652 CA  ALA  240 16.791 10.192  49.145 1.000 13.98
ANISOU 1652 CA  ALA  240 1468    1635   2210   -151  -335 - 1 0
ATOM   1653 C   ALA  240 16.728  9.776  50.605 1.000 13.44
ANISOU 1653 C   ALA  240 1439    1388   2279    77 -450   2 2
ATOM   1654 O   ALA  240 16.514  8.592  50.913 1.000 16.32
ANISOU 1654 O   ALA  240 1932    1567   2699   -215  -673 3 1 4
ATOM   1655 CB  ALA  240 15.712  9.565  48.268 1.000 15.21
ANISOU 1655 CB  ALA  240 1510    1962   2306   -104  -387 - 3 0 7
ATOM   1656 N   PRO  241 16.907 10.701  51.546 1.000 14.23
ANISOU 1656 N   PRO  241 1634    1551   2221   -87   -292 7 1
ATOM   1657 CA  PRO  241 17.035 10.251  52.940 1.000 14.68
ANISOU 1657 CA  PRO  241 1718    1681   2180   -350  -174 - 3 0
ATOM   1658 C   PRO  241 15.693  9.961  53.579 1.000 13.89
ANISOU 1658 C   PRO  241 1659    1581   2039   -107  -207 - 7 4
ATOM   1659 O   PRO  241 14.629 10.527  53.261 1.000 17.06
ANISOU 1659 O   PRO  241 1698    1946   2838    17 -254  1 4 6
ATOM   1660 CB  PRO  241 17.689 11.462  53.619 1.000 16.63
ANISOU 1660 CB  PRO  241 2162    1657   2501   -460  -487 5 5
ATOM   1661 CG  PRO  241 17.138 12.651  52.826 1.000 16.56
ANISOU 1661 CG  PRO  241 2433    1601   2258   -367  -274 3 1
ATOM   1662 CD  PRO  241 17.164 12.140  51.409 1.000 14.92
ANISOU 1662 CD  PRO  241 1841    1490   2339   -215  -186 - 6 6
ATOM   1663 N   ARG  242 15.740  9.049  54.544 1.000 15.74
ANISOU 1663 N   ARG  242 1914    1853   2212   -381  -308 2 0 4
ATOM   1664 CA  ARG  242 14.574  8.772  55.376 1.000 15.50
ANISOU 1664 CA  ARG  242 1955    1863   2073   -236  -291 1 8 0
ATOM   1665 C   ARG  242 14.406  9.841  56.437 1.000 16.60
ANISOU 1665 C   ARG  242 1889    2011   2407   -120  -411 - 5 1
ATOM   1666 O   ARG  242 15.372 10.416  56.994 1.000 18.31
ANISOU 1666 O   ARG  242 2041    2186   2732   -216  -559 - 1 8 0
ATOM   1667 CB  ARG  242 14.728  7.419  56.085 1.000 18.38
ANISOU 1667 CB  ARG  242 2920    1810   2253   -486  -391 2 6 9
ATOM   1668 CG  ARG  242 14.564  6.273  55.094 1.000 18.42
ANISOU 1668 CG  ARG  242 2372    1873   2755   -88   162 - 1 5 5
ATOM   1669 CD  ARG  242 14.854  4.935  55.796 1.000 23.07
ANISOU 1669 CD  ARG  242 3380    2022   3366   470   -483 - 2 1 7
ATOM   1670 NE  ARG  242 16.334  4.954  55.991 1.000 26.69
ANISOU 1670 NE  ARG  242 3498    2727   3916   444   -829 4 7
ATOM   1671 CZ  ARG  242 16.941  3.921  56.584 1.000 27.19
ANISOU 1671 CZ  ARG  242 3166    2879   4284   -297  -1143  8 0 2
ATOM   1672 NH1 ARG  242 16.157  2.913  56.989 1.000 33.14
ANISOU 1672 NH1 ARG  242 3810    3235   5546   -316  528  7 2 6
ATOM   1673 NH2 ARG  242 18.241  3.889  56.779 1.000 31.13
ANISOU 1673 NH2 ARG  242 3043    2925   5859   227   -769 4 8 4
ATOM   1674 N   HIS  243 13.188 10.057  56.872 1.000 17.55
ANISOU 1674 N   HIS  243 1979    2233   2457   -165  -173 - 7 4
ATOM   1675 CA  HIS  243 12.913 11.050  57.914 1.000 17.84
ANISOU 1675 CA  HIS  243 2186    2139   2452   -260  -123 - 7 5
ATOM   1676 C   HIS  243 11.644 10.627  58.643 1.000 17.52
ANISOU 1676 C   HIS  243 2102    2084   2470   -248  -164 - 3 2 5
ATOM   1677 O   HIS  243 10.870  9.803  58.132 1.000 20.23
ANISOU 1677 O   HIS  243 2226    2593   2868   -551  -323 - 3 9 2
ATOM   1678 CB  HIS  243 12.865 12.456  57.324 1.000 19.74
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ANISOU 1678 CB  HIS  243 2770     2248      2482    -188  -106 8 3
ATOM   1679 CG  HIS  243 11.922   12.630    56.187 1.000 22.60
ANISOU 1679 CG  HIS  243 3449     2513      2624    164   -382 0
ATOM   1680 ND1 HIS  243 12.209   12.299    54.879 1.000 25.87
ANISOU 1680 ND1 HIS  243 4780     2575      2473    -609  -403 5 3
ATOM   1681 CD2 HIS  243 10.633   13.034    56.172 1.000 29.11
ANISOU 1681 CD2 HIS  243 3220     4490      3348    121   -421 1630
ATOM   1682 CE1 HIS  243 11.182   12.573    54.109 1.000 32.92
ANISOU 1682 CE1 HIS  243 5835     3672      3001    -1102 -1367 689
ATOM   1683 NE2 HIS  243 10.214   13.012    54.875 1.000 36.95
ANISOU 1683 NE2 HIS  243 5719     4201      4119    1019  -2016 987
ATOM   1684 N   HIS  244 11.437   11.194    59.831 1.000 18.87
ANISOU 1684 N   HIS  244 2523     2477      2171    -88   -141 -117
ATOM   1685 CA  HIS  244 10.302   10.801    60.649 1.000 20.83
ANISOU 1685 CA  HIS  244 2802     2485      2628    171   251  272
ATOM   1686 C   HIS  244 9.927    11.968    61.551 1.000 20.33
ANISOU 1686 C   HIS  244 1803     2969      2953    -31   -78  -273
ATOM   1687 O   HIS  244 10.482   13.073    61.510 1.000 21.71
ANISOU 1687 O   HIS  244 2057     3418      2774    -535  145  -853
ATOM   1688 CB  HIS  244 10.714   9.557     61.468 1.000 24.38
ANISOU 1688 CB  HIS  244 4066     2644      2553    -76   -390 441
ATOM   1689 CG  HIS  244 11.859   9.725     62.423 1.000 28.34
ANISOU 1689 CG  HIS  244 4158     3498      3113    696   -727 -89
ATOM   1690 ND1 HIS  244 13.132   9.205     62.268 1.000 32.35
ANISOU 1690 ND1 HIS  244 4012     4471      3808    548   -485 -850
ATOM   1691 CD2 HIS  244 11.928   10.391    63.609 1.000 25.21
ANISOU 1691 CD2 HIS  244 2937     4137      2505    -373  45 219
ATOM   1692 CE1 HIS  244 13.887   9.531     63.312 1.000 31.71
ANISOU 1692 CE1 HIS  244 4157     4277      3613    1224  -749 -518
ATOM   1693 NE2 HIS  244 13.146   10.263    64.150 1.000 24.52
ANISOU 1693 NE2 HIS  244 3165     3517      2633    94 -82 492
ATOM   1694 N   VAL  245 8.890    11.687    62.349 1.000 23.87
ANISOU 1694 N   VAL  245 2627     3119      3322    -251  531  -310
ATOM   1695 CA  VAL  245 8.473    12.691    63.349 1.000 24.85
ANISOU 1695 CA  VAL  245 2785     3770      2888    481   149  -293
ATOM   1696 C   VAL  245 8.624    12.079    64.735 1.000 26.03
ANISOU 1696 C   VAL  245 3220     3558      3112    -289  179  8 9
ATOM   1697 O   VAL  245 8.023    11.025    64.969 1.000 27.98
ANISOU 1697 O   VAL  245 3120     3085      4428    42 295 -59
ATOM   1698 CB  VAL  245 7.020    13.114    63.099 1.000 26.02
ANISOU 1698 CB  VAL  245 2621     3489      3777    94 -103  -569
ATOM   1699 CG1 VAL  245 6.586    14.114    64.161 1.000 28.06
ANISOU 1699 CG1 VAL  245 2717     3330      4614    159   746  -485
ATOM   1700 CG2 VAL  245 6.927    13.705    61.680 1.000 30.51
ANISOU 1700 CG2 VAL  245 3564     3809      4220    1264  -305 -33
ATOM   1701 N   ALA  246 9.399    12.696    65.603 1.000 28.08
ANISOU 1701 N   ALA  246 4338     3787      2543    -850  250  254
ATOM   1702 CA  ALA  246 9.567    12.316    67.003 1.000 27.45
ANISOU 1702 CA  ALA  246 4363     3360      2707    292   275  373
ATOM   1703 C   ALA  246 8.356    12.740    67.833 1.000 32.68
ANISOU 1703 C   ALA  246 4915     4473      3031    98 880 197
ATOM   1704 O   ALA  246 7.774    13.791    67.563 1.000 29.54
ANISOU 1704 O   ALA  246 3522     4283      3417    -224  875  -329
ATOM   1705 CB  ALA  246 10.819   13.010    67.542 1.000 30.33
ANISOU 1705 CB  ALA  246 4564     3949      3011    615   -221 -422
ATOM   1706 N   ALA  247 8.048    11.958    68.849 1.000 34.09
ANISOU 1706 N   ALA  247 4483     5156      3311    -1190 466  393
ATOM   1707 CA  ALA  247 7.036    12.190    69.859 1.000 34.23
ANISOU 1707 CA  ALA  247 4188     5627      3189    -1215 315  515
ATOM   1708 C   ALA  247 7.609    12.910    71.081 1.000 33.31
ANISOU 1708 C   ALA  247 5419     4684      2555    249   -506 1147
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ATOM     1709  O    ALA   247  8.733   12.708  71.523 1.000 38.23
ANISOU   1709  O    ALA   247  5787   4478    4259   -378  -1519  1230
ATOM     1710  CB   ALA   247  6.383   10.881  70.314 1.000 47.11
ANISOU   1710  CB   ALA   247  8374   6726    2801   -2800  1464  686
ATOM     1711  N    PRO   248  6.817   13.851  71.577 1.000 42.28
ANISOU   1711  N    PRO   248  5771   5458    4836   -300   933   -97
ATOM     1712  CA   PRO   248  7.256   14.581  72.773 1.000 44.85
ANISOU   1712  CA   PRO   248  7568   5478    3996   -645  1413  214
ATOM     1713  C    PRO   248  7.161   13.618  73.948 1.000 49.25
ANISOU   1713  C    PRO   248  7978   5660    5075   -1446  552  985
ATOM     1714  O    PRO   248  6.251   12.794  74.014 1.000 45.48
ANISOU   1714  O    PRO   248  7651   5391    4237   -1127 2573  -796
ATOM     1715  CB   PRO   248  6.196   15.674  72.897 1.000 49.75
ANISOU   1715  CB   PRO   248  8563   4816    5523   -513  1238  -138
ATOM     1716  CG   PRO   248  4.973   15.053  72.299 1.000 50.89
ANISOU   1716  CG   PRO   248  7228   5564    6545   -108  2210  -1064
ATOM     1717  CD   PRO   248  5.489   14.272  71.114 1.000 44.69
ANISOU   1717  CD   PRO   248  6395   4579    6006    937   953   -577
ATOM     1718  N    ARG   249  8.109   13.683  74.883 1.000 48.76
ANISOU   1718  N    ARG   249  9141   6341    3045   -1317 1069  -477
ATOM     1719  CA   ARG   249  7.865   12.783  76.024 1.000 55.51
ANISOU   1719  CA   ARG   249  10023  6914    4156   -1098  895  566
ATOM     1720  C    ARG   249  6.844   13.466  76.916 1.000 46.09
ANISOU   1720  C    ARG   249  5561   8382    3568   -2484  -7  1237
ATOM     1721  O    ARG   249  6.244   12.915  77.831 1.000 56.25
ANISOU   1721  O    ARG   249  7572   6368    7433   -377  1799  3995
ATOM     1722  CB   ARG   249  9.177   12.459  76.721 1.000 55.24
ANISOU   1722  CB   ARG   249  8950   7715    4326    705  2864  1270
ATOM     1723  CG   ARG   249  9.915   11.278  76.110 1.000 71.04
ANISOU   1723  CG   ARG   249  12881  7330    6779   1135  3707  622
ATOM     1724  CD   ARG   249  10.403  10.303  77.165 1.000 72.89
ANISOU   1724  CD   ARG   249  11721  7991    7984   2171  2723  409
ATOM     1725  NE   ARG   249  11.124   9.162  76.580 1.000 70.73
ANISOU   1725  NE   ARG   249  8627   9977    8271   2362  2650  -266
ATOM     1726  CZ   ARG   249  12.039   8.493  77.282 1.000 72.71
ANISOU   1726  CZ   ARG   249  10269  9417    7942   2304  2153  133
ATOM     1727  NH1  ARG   249  12.297   8.893  78.521 1.000 89.50
ANISOU   1727  NH1  ARG   249  22286  6161    5559   2015  1622  3874
ATOM     1728  NH2  ARG   249  12.682   7.462  76.761 1.000 67.68
ANISOU   1728  NH2  ARG   249  5358   10062   10295  1004  3886  221
ATOM     1729  N    ALA   254  1.981   18.918  75.430 1.000 85.24
ANISOU   1729  N    ALA   254  15501  7922    8964   -4581 -1437 2347
ATOM     1730  CA   ALA   254  2.287   20.081  76.257 1.000 76.08
ANISOU   1730  CA   ALA   254  12510  8110    8286   -3993 1617 1592
ATOM     1731  C    ALA   254  2.943   21.216  75.489 1.000 60.91
ANISOU   1731  C    ALA   254  8383   5719    9040   -506  2886 1312
ATOM     1732  O    ALA   254  4.174   21.309  75.487 1.000 72.37
ANISOU   1732  O    ALA   254  8056   8109    11332  1602  4553 3381
ATOM     1733  CB   ALA   254  3.264   19.667  77.351 1.000 60.48
ANISOU   1733  CB   ALA   254  12589  7262    3131   -866  4570 -1112
ATOM     1734  N    GLY   255  2.200   22.108  74.846 1.000 54.40
ANISOU   1734  N    GLY   255  8029   5451    7190    594  2922 -940
ATOM     1735  CA   GLY   255  2.880   23.171  74.098 1.000 40.05
ANISOU   1735  CA   GLY   255  5181   4570    5465   1424  836  -921
ATOM     1736  C    GLY   255  3.640   22.565  72.921 1.000 38.82
ANISOU   1736  C    GLY   255  4227   4772    5749    557  702  -1561
ATOM     1737  O    GLY   255  4.580   23.163  72.398 1.000 39.96
ANISOU   1737  O    GLY   255  2978   6491    5715   -128  -136 -2226
ATOM     1738  N    SER   256  3.164   21.387  72.509 1.000 37.29
ANISOU   1738  N    SER   256  5047   4594    4527    389   11  -853
ATOM     1739  CA   SER   256  3.738   20.606  71.429 1.000 35.71
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ANISOU 1739 CA   SER   256 4737      4533      4299      560    -501 -919
ATOM   1740 C    SER   256 2.983   20.742   70.118 1.000 34.93
ANISOU 1740 C    SER   256 4584      4669      4019      -98     -85   9 1
ATOM   1741 O    SER   256 3.251   20.000   69.162 1.000 33.92
ANISOU 1741 O    SER   256 3575      6107      3207      503     304   3 7 7
ATOM   1742 CB   SER   256 3.845   19.136   71.853 1.000 30.17
ANISOU 1742 CB   SER   256 3125      4830      3509      624     212   -492
ATOM   1743 OG   SER   256 2.688   18.752   72.601 1.000 61.15
ANISOU 1743 OG   SER   256 2987      8497      11750     451    1943 2630
ATOM   1744 N    SER   257 2.065   21.700   70.030 1.000 35.54
ANISOU 1744 N    SER   257 4037      5989      3479      347     242   -8 6
ATOM   1745 CA   SER   257 1.379   21.993   68.767 1.000 30.95
ANISOU 1745 CA   SER   257 2824      5827      3109      170     672   -5 0 9
ATOM   1746 C    SER   257 2.378   22.538   67.760 1.000 30.63
ANISOU 1746 C    SER   257 3181      5524      2934     -476     765   -1 2 9 7
ATOM   1747 O    SER   257 3.359   23.159   68.199 1.000 34.70
ANISOU 1747 O    SER   257 3500      6070      3616     -829     603   -1 5 1 6
ATOM   1748 CB   SER   257 0.331   23.088   69.036 1.000 38.70
ANISOU 1748 CB   SER   257 3085      6518      5103      796    1381 4 3 5
ATOM   1749 OG   SER   257 0.801   24.361   68.601 1.000 65.12
ANISOU 1749 OG   SER   257 8002      5175      11565    -999    -3375 3 8 3
ATOM   1750 N    ARG   258 2.119   22.384   66.471 1.000 30.51
ANISOU 1750 N    ARG   258 3668      5068      2855     -332     677   -9 9 5
ATOM   1751 CA   ARG   258 2.997   22.819   65.396 1.000 28.15
ANISOU 1751 CA   ARG   258 3100      4620      2976     -106     358   -5 4 4
ATOM   1752 C    ARG   258 2.198   22.913   64.096 1.000 25.64
ANISOU 1752 C    ARG   258 3488      3381      2872     -676     273   -9 0 4
ATOM   1753 O    ARG   258 1.132   22.294   63.981 1.000 24.93
ANISOU 1753 O    ARG   258 3162      3240      3070     -441     478   -5 6 0
ATOM   1754 CB   ARG   258 4.175   21.873   65.154 1.000 27.21
ANISOU 1754 CB   ARG   258 3158      4041      3141     -446     313   -1 3 5 2
ATOM   1755 CG   ARG   258 3.861   20.508   64.570 1.000 30.90
ANISOU 1755 CG   ARG   258 4782      3429      3531     -737    -738 -3 8 9
ATOM   1756 CD   ARG   258 5.039   19.537   64.769 1.000 36.65
ANISOU 1756 CD   ARG   258 5937      3466      4523      106     477   3 0 6
ATOM   1757 NE   ARG   258 4.597   18.176   64.411 1.000 32.42
ANISOU 1757 NE   ARG   258 3372      3858      5089      -85    -274 5 2 8
ATOM   1758 CZ   ARG   258 4.633   17.777   63.143 1.000 37.32
ANISOU 1758 CZ   ARG   258 5670      2958      5553      155     680   4 3
ATOM   1759 NH1  ARG   258 5.075   18.622   62.217 1.000 29.98
ANISOU 1759 NH1  ARG   258 3077      3435      4881     -150    -211 -1 0 3
ATOM   1760 NH2  ARG   258 4.210   16.566   62.824 1.000 38.66
ANISOU 1760 NH2  ARG   258 5812      3151      5724     -190    -1632 8 6 5
ATOM   1761 N    THR   259 2.806   23.572   63.120 1.000 23.62
ANISOU 1761 N    THR   259 2625      3578      2771     -519     315   -1 0 3 7
ATOM   1762 CA   THR   259 2.337   23.482   61.730 1.000 21.97
ANISOU 1762 CA   THR   259 2614      2934      2800      -36     247   -1 0 4 1
ATOM   1763 C    THR   259 3.528   23.197   60.808 1.000 19.76
ANISOU 1763 C    THR   259 2257      2663      2587      -38      21 -6 9 9
ATOM   1764 O    THR   259 4.698   23.411   61.159 1.000 21.13
ANISOU 1764 O    THR   259 2464      3096      2468     -495     -10  -2 8 6
ATOM   1765 CB   THR   259 1.682   24.793   61.278 1.000 24.04
ANISOU 1765 CB   THR   259 2125      3084      3927       70    -157 -1 2 2 9
ATOM   1766 OG1  THR   259 2.697   25.790   61.041 1.000 23.14
ANISOU 1766 OG1  THR   259 2297      2848      3648      196    -142 -8 2 9
ATOM   1767 CG2  THR   259 0.760   25.408   62.331 1.000 25.17
ANISOU 1767 CG2  THR   259 2941      3229      3393      726     264   -1 3 6
ATOM   1768 N    SER   260 3.234   22.706   59.600 1.000 20.41
ANISOU 1768 N    SER   260 2386      2762      2609      -61      74 -8 0 6
ATOM   1769 CA   SER   260 4.225   22.515   58.551 1.000 19.33
ANISOU 1769 CA   SER   260 2488      2459      2399      192       8  -3 4 4
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ATOM    1770 C    SER  260 3.587   22.871  57.210 1.000 18.78
ANISOU  1770 C    SER  260 1996    2544    2595   -379  -264 -311
ATOM    1771 O    SER  260 2.375   22.758  56.988 1.000 21.20
ANISOU  1771 O    SER  260 1917    2448    3689   -75   -269 -573
ATOM    1772 CB   SER  260 4.738   21.076  58.480 1.000 20.28
ANISOU  1772 CB   SER  260 2491    2458    2755   160   -101 -495
ATOM    1773 OG   SER  260 3.656   20.197  58.227 1.000 22.70
ANISOU  1773 OG   SER  260 2758    2574    3294   -113  -284 -169
ATOM    1774 N    SER  261 4.474   23.329  56.330 1.000 18.79
ANISOU  1774 N    SER  261 2189    2215    2737   -55   -92  3 5
ATOM    1775 CA   SER  261 4.148   23.585  54.929 1.000 16.88
ANISOU  1775 CA   SER  261 2074    1718    2622   22 -117  -4 0 4
ATOM    1776 C    SER  261 5.066   22.672  54.106 1.000 17.25
ANISOU  1776 C    SER  261 1720    1833    3000   101   -350 -491
ATOM    1777 O    SER  261 6.272   22.876  54.173 1.000 19.96
ANISOU  1777 O    SER  261 1712    2417    3456   50 -483  -7 8 1
ATOM    1778 CB   SER  261 4.471   25.028  54.503 1.000 19.95
ANISOU  1778 CB   SER  261 2903    1675    3002   164   -113 -135
ATOM    1779 OG   SER  261 4.404   25.127  53.107 1.000 35.64
ANISOU  1779 OG   SER  261 5435    4814    3293   -1089 -766 1263
ATOM    1780 N    VAL  262 4.467   21.722  53.435 1.000 15.56
ANISOU  1780 N    VAL  262 1751    2021    2140   -75   -40  -4 3 6
ATOM    1781 CA   VAL  262 5.247   20.713  52.711 1.000 15.41
ANISOU  1781 CA   VAL  262 1871    1938    2048   43 21 -196
ATOM    1782 C    VAL  262 4.914   20.874  51.242 1.000 14.05
ANISOU  1782 C    VAL  262 1460    1784    2095   -13   29 -1 4 4
ATOM    1783 O    VAL  262 3.759   20.712  50.844 1.000 15.45
ANISOU  1783 O    VAL  262 1488    1900    2481   -175  -94  -1 9 1
ATOM    1784 CB   VAL  262 4.902   19.307  53.253 1.000 16.87
ANISOU  1784 CB   VAL  262 2144    2005    2260   165   -164 2 3
ATOM    1785 CG1  VAL  262 5.567   18.275  52.364 1.000 20.01
ANISOU  1785 CG1  VAL  262 2433    2006    3165   4   -191  -6 3 7
ATOM    1786 CG2  VAL  262 5.335   19.200  54.715 1.000 18.63
ANISOU  1786 CG2  VAL  262 2390    2242    2446   147   -397 175
ATOM    1787 N    PHE  263 5.894   21.163  50.412 1.000 13.73
ANISOU  1787 N    PHE  263 1497    1573    2148   5   -64 186
ATOM    1788 CA   PHE  263 5.762   21.411  48.994 1.000 13.04
ANISOU  1788 CA   PHE  263 1654    1196    2105   -12   -193 113
ATOM    1789 C    PHE  263 6.479   20.253  48.284 1.000 13.56
ANISOU  1789 C    PHE  263 1432    1351    2370   -175  -98  - 8 7
ATOM    1790 O    PHE  263 7.732   20.177  48.281 1.000 13.83
ANISOU  1790 O    PHE  263 1415    1437    2403   -82   -299 -1 0 4
ATOM    1791 CB   PHE  263 6.364   22.770  48.594 1.000 13.50
ANISOU  1791 CB   PHE  263 1658    1374    2098   -295  -97  3 4
ATOM    1792 CG   PHE  263 6.062   23.148  47.135 1.000 13.34
ANISOU  1792 CG   PHE  263 1616    1358    2096   -159  -111 8 2
ATOM    1793 CD1  PHE  263 6.750   22.635  46.051 1.000 14.95
ANISOU  1793 CD1  PHE  263 1977    1547    2156   -354  -131 -3 8 4
ATOM    1794 CD2  PHE  263 5.005   24.048  46.883 1.000 15.37
ANISOU  1794 CD2  PHE  263 1549    1557    2735   -139  -264 3 0 3
ATOM    1795 CE1  PHE  263 6.468   22.945  44.720 1.000 14.58
ANISOU  1795 CE1  PHE  263 1721    1621    2196   -242  71 -1 4 4
ATOM    1796 CE2  PHE  263 4.703   24.366  45.566 1.000 14.71
ANISOU  1796 CE2  PHE  263 1482    1428    2680   -20   -261 1 3 7
ATOM    1797 CZ   PHE  263 5.383   23.809  44.479 1.000 16.55
ANISOU  1797 CZ   PHE  263 1935    1492    2862   -152  29 1 4
ATOM    1798 N    PHE  264 5.721   19.405  47.588 1.000 12.07
ANISOU  1798 N    PHE  264 1277    1343    1967   -66   -49  1 9
ATOM    1799 CA   PHE  264 6.267   18.328  46.769 1.000 11.90
ANISOU  1799 CA   PHE  264 1177    1289    2058   -129  34 - 2 1
ATOM    1800 C    PHE  264 6.440   18.775  45.314 1.000 11.76
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ANISOU 1800 C    PHE   264 1206     1258     2004     -121  -42   8
ATOM   1801 O    PHE   264 5.418   19.097   44.683 1.000 12.55
ANISOU 1801 O    PHE   264 1165     1473     2133      -77 -120  4 6
ATOM   1802 CB   PHE   264 5.346   17.099   46.773 1.000 12.39
ANISOU 1802 CB   PHE   264 1101     1498     2110     -304  -42  6 3
ATOM   1803 CG   PHE   264 5.022   16.558   48.150 1.000 13.97
ANISOU 1803 CG   PHE   264 1647     1465     2197     -290   13 1 21
ATOM   1804 CD1  PHE   264 5.960   15.848   48.852 1.000 17.07
ANISOU 1804 CD1  PHE   264 2039     1976     2471     -422 -410 4 97
ATOM   1805 CD2  PHE   264 3.747   16.679   48.668 1.000 17.41
ANISOU 1805 CD2  PHE   264 1835     2359     2419     -440  433  1 12
ATOM   1806 CE1  PHE   264 5.661   15.247   50.053 1.000 20.59
ANISOU 1806 CE1  PHE   264 2616     2710     2496     -556 -425 7 25
ATOM   1807 CE2  PHE   264 3.458   16.133   49.906 1.000 22.51
ANISOU 1807 CE2  PHE   264 2151     4047     2355     -787  106  5 53
ATOM   1808 CZ   PHE   264 4.386   15.350   50.562 1.000 20.88
ANISOU 1808 CZ   PHE   264 2889     2376     2669     -936  -22  3 0 6
ATOM   1809 N    LEU   265 7.676   18.756   44.811 1.000 11.81
ANISOU 1809 N    LEU   265 1192     1248     2047      -37   47 1 9
ATOM   1810 CA   LEU   265 7.900   19.000   43.374 1.000 12.01
ANISOU 1810 CA   LEU   265 1264     1269     2028     -223   16 - 6 3
ATOM   1811 C    LEU   265 7.915   17.617   42.703 1.000 12.10
ANISOU 1811 C    LEU   265 1266     1298     2033     -117  -81  3
ATOM   1812 O    LEU   265 8.842   16.834   42.915 1.000 12.93
ANISOU 1812 O    LEU   265 1367     1283     2260     -107 -152 4 4
ATOM   1813 CB   LEU   265 9.246   19.730   43.156 1.000 12.59
ANISOU 1813 CB   LEU   265 1399     1364     2019     -257   57 - 9
ATOM   1814 CG   LEU   265 9.500   20.124   41.709 1.000 12.19
ANISOU 1814 CG   LEU   265 1168     1399     2066     -292 -248 3 0 2
ATOM   1815 CD1  LEU   265 8.620   21.314   41.318 1.000 13.29
ANISOU 1815 CD1  LEU   265 1518     1546     1984       84 36 1 9
ATOM   1816 CD2  LEU   265 10.971  20.458   41.449 1.000 13.14
ANISOU 1816 CD2  LEU   265 1204     1593     2197     -234   41 - 2 0
ATOM   1817 N    ARG   266 6.842   17.249   41.996 1.000 12.06
ANISOU 1817 N    ARG   266 1412     1127     2043     -220 -190 4 5
ATOM   1818 CA   ARG   266 6.586   15.913   41.488 1.000 12.07
ANISOU 1818 CA   ARG   266 1372     1201     2012     -258    0  8 0
ATOM   1819 C    ARG   266 6.619   15.965   39.972 1.000 11.75
ANISOU 1819 C    ARG   266 1203     1315     1948       29 -267  1 42
ATOM   1820 O    ARG   266 6.032   16.860   39.396 1.000 13.06
ANISOU 1820 O    ARG   266 1430     1318     2214        5 -173  2 81
ATOM   1821 CB   ARG   266 5.243   15.370   41.994 1.000 12.95
ANISOU 1821 CB   ARG   266 1142     1477     2302     -189   43 - 3 3
ATOM   1822 CG   ARG   266 5.036   15.606   43.488 1.000 13.80
ANISOU 1822 CG   ARG   266 1351     1686     2207     -159   66 -115
ATOM   1823 CD   ARG   266 3.723   15.041   43.993 1.000 12.70
ANISOU 1823 CD   ARG   266 1369     1362     2094       66  -22 8 4
ATOM   1824 NE   ARG   266 2.581   15.648   43.281 1.000 12.97
ANISOU 1824 NE   ARG   266 1343     1155     2428       52 -165  -137
ATOM   1825 CZ   ARG   266 1.304   15.281   43.500 1.000 11.34
ANISOU 1825 CZ   ARG   266 1432     1009     1869       45 -149  -1 0 3
ATOM   1826 NH1  ARG   266 0.995   14.414   44.476 1.000 13.39
ANISOU 1826 NH1  ARG   266 1802     1165     2119      -11  -38  7 2
ATOM   1827 NH2  ARG   266 0.305   15.821   42.826 1.000 12.55
ANISOU 1827 NH2  ARG   266 1490     1067     2210      125 -357 -1 5 9
ATOM   1828 N    PRO   267 7.237   14.951   39.357 1.000 12.74
ANISOU 1828 N    PRO   267 1418     1394     2030       16 -146  1 0 8
ATOM   1829 CA   PRO   267 7.298   14.947   37.887 1.000 13.88
ANISOU 1829 CA   PRO   267 1442     1786     2047      167 -125 - 8 4
ATOM   1830 C    PRO   267 5.957   14.722   37.222 1.000 12.61
ANISOU 1830 C    PRO   267 1413     1508     1868       -6 44 2 7
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ATOM    1831 O    PRO  267 4.998   14.155  37.772 1.000 13.60
ANISOU  1831 O    PRO  267 1648   1355    2164   -160  118   9  3
ATOM    1832 CB   PRO  267 8.238   13.761  37.599 1.000 15.30
ANISOU  1832 CB   PRO  267 1435   1740    2637    115  -28 -169
ATOM    1833 CG   PRO  267 8.033   12.846  38.764 1.000 15.82
ANISOU  1833 CG   PRO  267 1885   1804    2324    381 -270 -197
ATOM    1834 CD   PRO  267 7.872   13.746  39.965 1.000 14.73
ANISOU  1834 CD   PRO  267 1803   1356    2438    311 -666 -205
ATOM    1835 N    ASN  268 5.933   15.051  35.939 1.000 13.27
ANISOU  1835 N    ASN  268 1601   1665    1777   -126  -43 -127
ATOM    1836 CA   ASN  268 4.800   14.709  35.073 1.000 13.72
ANISOU  1836 CA   ASN  268 1793   1401    2018   -214 -236 -71
ATOM    1837 C    ASN  268 4.723   13.192  34.875 1.000 13.14
ANISOU  1837 C    ASN  268 1485   1350    2156   -213  104   5  4
ATOM    1838 O    ASN  268 5.702   12.467  34.934 1.000 13.90
ANISOU  1838 O    ASN  268 1698   1416    2167    -91  123  -36
ATOM    1839 CB   ASN  268 4.997   15.338  33.690 1.000 15.74
ANISOU  1839 CB   ASN  268 2597   1369    2016    -66 -437 135
ATOM    1840 CG   ASN  268 5.011   16.862  33.811 1.000 15.41
ANISOU  1840 CG   ASN  268 2255   1439    2162    -17 -184  4  7
ATOM    1841 OD1  ASN  268 4.069   17.454  34.352 1.000 17.75
ANISOU  1841 OD1  ASN  268 2573   1686    2487     42   91  -98
ATOM    1842 ND2  ASN  268 6.066   17.503  33.319 1.000 16.61
ANISOU  1842 ND2  ASN  268 2408   1355    2546    -50  -57  142
ATOM    1843 N    ALA  269 3.531   12.712  34.594 1.000 13.99
ANISOU  1843 N    ALA  269 1677   1467    2172   -356  -65  170
ATOM    1844 CA   ALA  269 3.278   11.286  34.353 1.000 13.42
ANISOU  1844 CA   ALA  269 1459   1405    2234   -208 -118 107
ATOM    1845 C    ALA  269 4.182   10.729  33.252 1.000 13.93
ANISOU  1845 C    ALA  269 1289   1538    2466   -168   -5 153
ATOM    1846 O    ALA  269 4.581   9.550   33.318 1.000 14.97
ANISOU  1846 O    ALA  269 1718   1476    2494   -143  112   8  6
ATOM    1847 CB   ALA  269 1.806   11.051  34.008 1.000 13.76
ANISOU  1847 CB   ALA  269 1300   1474    2454    -60  -61  123
ATOM    1848 N    ASP  270 4.482   11.541  32.251 1.000 14.38
ANISOU  1848 N    ASP  270 1688   1476    2300   -151   30  -5
ATOM    1849 CA   ASP  270 5.247   11.079  31.098 1.000 14.83
ANISOU  1849 CA   ASP  270 1747   1693    2194    -99  -42   6  8
ATOM    1850 C    ASP  270 6.749   11.287  31.227 1.000 15.68
ANISOU  1850 C    ASP  270 1714   1886    2357   -224  143   8  6
ATOM    1851 O    ASP  270 7.483   11.008  30.255 1.000 17.12
ANISOU  1851 O    ASP  270 1952   2354    2200    -80  139  226
ATOM    1852 CB   ASP  270 4.718   11.681  29.800 1.000 17.67
ANISOU  1852 CB   ASP  270 2461   1966    2288    -75 -319 126
ATOM    1853 CG   ASP  270 4.968   13.168  29.649 1.000 18.22
ANISOU  1853 CG   ASP  270 2284   2024    2613    -88  -80  474
ATOM    1854 OD1  ASP  270 5.386   13.826  30.607 1.000 20.55
ANISOU  1854 OD1  ASP  270 3424   1541    2844    -47 -287 425
ATOM    1855 OD2  ASP  270 4.646   13.698  28.552 1.000 23.06
ANISOU  1855 OD2  ASP  270 3317   2727    2719    -49 -136 812
ATOM    1856 N    PHE  271 7.221   11.668  32.413 1.000 13.93
ANISOU  1856 N    PHE  271 1556   1318    2417     97  31  4  1
ATOM    1857 CA   PHE  271 8.671   11.723  32.644 1.000 14.41
ANISOU  1857 CA   PHE  271 1624   1430    2423    110   29  263
ATOM    1858 C    PHE  271 9.275   10.349  32.325 1.000 13.31
ANISOU  1858 C    PHE  271 1402   1430    2225    -30   28  218
ATOM    1859 O    PHE  271 8.790   9.340   32.870 1.000 14.91
ANISOU  1859 O    PHE  271 1900   1374    2392    -26  240  192
ATOM    1860 CB   PHE  271 8.942   12.146  34.098 1.000 15.57
ANISOU  1860 CB   PHE  271 1700   1721    2495    -66  -36   9
ATOM    1861 CG   PHE  271 10.386  11.791  34.516 1.000 14.56
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ANISOU 1861 CG   PHE  271 1729     1320     2485    -152   34 -124
ATOM   1862 CD1  PHE  271 11.460   12.369   33.814 1.000 17.76
ANISOU 1862 CD1  PHE  271 1714     1581     3452    -235   393  -249
ATOM   1863 CD2  PHE  271 10.698   10.972   35.570 1.000 18.04
ANISOU 1863 CD2  PHE  271 2182     1543     3130    -95   -540 172
ATOM   1864 CE1  PHE  271 12.786   12.092   34.166 1.000 17.54
ANISOU 1864 CE1  PHE  271 1838     1700     3128    -291   114  -50
ATOM   1865 CE2  PHE  271 11.997   10.609   35.899 1.000 18.84
ANISOU 1865 CE2  PHE  271 1935     1646     3578    -392  -396 425
ATOM   1866 CZ   PHE  271 13.039   11.154   35.162 1.000 17.25
ANISOU 1866 CZ   PHE  271 2444     1697     2415    -486   -19  -394
ATOM   1867 N    THR  272 10.278   10.298   31.453 1.000 13.78
ANISOU 1867 N    THR  272 1514     1641     2083    30  19 154
ATOM   1868 CA   THR  272 10.811   9.046    30.938 1.000 13.99
ANISOU 1868 CA   THR  272 1551     1660     2105    -99    83 6 7
ATOM   1869 C    THR  272 12.246   8.841    31.410 1.000 14.71
ANISOU 1869 C    THR  272 1598     1549     2441    -3 108 357
ATOM   1870 O    THR  272 13.046   9.808    31.424 1.000 16.23
ANISOU 1870 O    THR  272 1646     1742     2780    -246   5   185
ATOM   1871 CB   THR  272 10.751   9.117    29.388 1.000 16.27
ANISOU 1871 CB   THR  272 1856     2205     2119    191    125 8
ATOM   1872 OG1  THR  272 9.341    9.221    29.032 1.000 17.99
ANISOU 1872 OG1  THR  272 1996     2473     2368    64  -190  264
ATOM   1873 CG2  THR  272 11.249   7.856    28.723 1.000 17.94
ANISOU 1873 CG2  THR  272 2423     2167     2227    173    177  -94
ATOM   1874 N    PHE  273 12.567   7.600    31.743 1.000 14.91
ANISOU 1874 N    PHE  273 1644     1521     2499    92 238 218
ATOM   1875 CA   PHE  273 13.894   7.253    32.254 1.000 15.16
ANISOU 1875 CA   PHE  273 1602     1813     2345    296    277  55
ATOM   1876 C    PHE  273 14.350   5.899    31.724 1.000 14.69
ANISOU 1876 C    PHE  273 1408     1647     2528    24 479 178
ATOM   1877 O    PHE  273 13.541   5.086    31.262 1.000 15.91
ANISOU 1877 O    PHE  273 1738     1767     2541    -115   450   119
ATOM   1878 CB   PHE  273 13.899   7.301    33.769 1.000 15.77
ANISOU 1878 CB   PHE  273 1758     1921     2314    -344   286   123
ATOM   1879 CG   PHE  273 12.931   6.336    34.424 1.000 14.54
ANISOU 1879 CG   PHE  273 1390     1726     2410    -95    -11   195
ATOM   1880 CD1  PHE  273 11.601   6.743    34.655 1.000 16.64
ANISOU 1880 CD1  PHE  273 1457     2343     2521    -24    308   362
ATOM   1881 CD2  PHE  273 13.295   5.038    34.721 1.000 15.23
ANISOU 1881 CD2  PHE  273 1863     1624     2300    -110   91 136
ATOM   1882 CE1  PHE  273 10.719   5.848    35.259 1.000 16.10
ANISOU 1882 CE1  PHE  273 1593     2158     2365    -162   292   122
ATOM   1883 CE2  PHE  273 12.419   4.148    35.354 1.000 16.01
ANISOU 1883 CE2  PHE  273 1904     1980     2198    -139   285   181
ATOM   1884 CZ   PHE  273 11.109   4.559    35.548 1.000 15.18
ANISOU 1884 CZ   PHE  273 1843     2001     1925    -141   73 -227
ATOM   1885 N    SER  274 15.634   5.612    31.926 1.000 15.31
ANISOU 1885 N    SER  274 1559     1940     2317    361    383   247
ATOM   1886 CA   SER  274 16.221   4.318    31.518 1.000 15.37
ANISOU 1886 CA   SER  274 1476     1723     2642    32 557 156
ATOM   1887 C    SER  274 15.953   3.284    32.588 1.000 14.67
ANISOU 1887 C    SER  274 973 1877     2726    -113   265 302
ATOM   1888 O    SER  274 16.310   3.476    33.770 1.000 15.98
ANISOU 1888 O    SER  274 1668     1677     2728    126    143   193
ATOM   1889 CB   SER  274 17.742   4.556    31.356 1.000 17.41
ANISOU 1889 CB   SER  274 1487     2019     3112    235    945   725
ATOM   1890 OG   SER  274 18.362   3.280    31.334 1.000 18.03
ANISOU 1890 OG   SER  274 1839     1961     3052    293    840   188
ATOM   1891 N    VAL  275 15.395   2.133    32.182 1.000 15.58
ANISOU 1891 N    VAL  275 1646     1857     2417    -182   461   261
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ATOM     1892 CA   VAL  275 15.158   1.033   33.137 1.000 15.65
ANISOU   1892 CA   VAL  275 1681   1800    2466   -180  261   2 6 5
ATOM     1893 C    VAL  275 16.454   0.445   33.659 1.000 15.33
ANISOU   1893 C    VAL  275 1805   1881    2139    116  392   - 4 5
ATOM     1894 O    VAL  275 16.623   0.280   34.871 1.000 15.68
ANISOU   1894 O    VAL  275 2037   1655    2267      6  297 1 9 6
ATOM     1895 CB   VAL  275 14.227  -0.004   32.483 1.000 16.05
ANISOU   1895 CB   VAL  275 1635   1708    2755    -76  405   2 1
ATOM     1896 CG1  VAL  275 14.080  -1.186   33.426 1.000 17.04
ANISOU   1896 CG1  VAL  275 2045   1688    2740   -211  230   1 5
ATOM     1897 CG2  VAL  275 12.847   0.608   32.203 1.000 18.45
ANISOU   1897 CG2  VAL  275 1650   2432    2928    -57  135   2 6 9
ATOM     1898 N    PRO  276 17.437   0.093   32.844 1.000 16.21
ANISOU   1898 N    PRO  276 1927   1700    2532     97  589 3 6
ATOM     1899 CA   PRO  276 18.707  -0.434   33.399 1.000 18.10
ANISOU   1899 CA   PRO  276 1736   2115    3025    147  616   - 9 3
ATOM     1900 C    PRO  276 19.382   0.541   34.321 1.000 17.52
ANISOU   1900 C    PRO  276 1998   1961    2697     97  469 2 3 9
ATOM     1901 O    PRO  276 19.963   0.171   35.348 1.000 19.66
ANISOU   1901 O    PRO  276 2015   2409    3047     24  280 4 6 8
ATOM     1902 CB   PRO  276 19.590  -0.796   32.214 1.000 20.80
ANISOU   1902 CB   PRO  276 2094   2687    3121    306  771   - 2 4 9
ATOM     1903 CG   PRO  276 18.852  -0.390   30.999 1.000 21.57
ANISOU   1903 CG   PRO  276 2051   3098    3046    340  802   - 2 8 8
ATOM     1904 CD   PRO  276 17.446  -0.021   31.368 1.000 18.17
ANISOU   1904 CD   PRO  276 2053   2306    2546    179  832   - 3 1 8
ATOM     1905 N    LEU  277 19.325   1.845   34.027 1.000 17.09
ANISOU   1905 N    LEU  277 1571   1898    3025    230  511   1 0 7
ATOM     1906 CA   LEU  277 19.962   2.802   34.940 1.000 19.34
ANISOU   1906 CA   LEU  277 2035   2141    3171   -219  218   2 6 2
ATOM     1907 C    LEU  277 19.214   2.858   36.249 1.000 18.34
ANISOU   1907 C    LEU  277 1963   1958    3049    -33   -3 - 3 8
ATOM     1908 O    LEU  277 19.815   2.957   37.319 1.000 19.29
ANISOU   1908 O    LEU  277 2466   1710    3154   -271 -188 - 2
ATOM     1909 CB   LEU  277 20.094   4.178   34.291 1.000 21.41
ANISOU   1909 CB   LEU  277 2739   2011    3383     14  12 2 8 7
ATOM     1910 CG   LEU  277 20.910   5.192   35.111 1.000 26.34
ANISOU   1910 CG   LEU  277 3662   2367    3978   -980 -547 9 4 4
ATOM     1911 CD1  LEU  277 22.396   4.839   35.069 1.000 38.04
ANISOU   1911 CD1  LEU  277 3764   3171    7518   -487 -2057 8 5 3
ATOM     1912 CD2  LEU  277 20.708   6.607   34.631 1.000 31.98
ANISOU   1912 CD2  LEU  277 4023   2018    6109   -366  508   7 3 2
ATOM     1913 N    ALA  278 17.875   2.711   36.202 1.000 17.30
ANISOU   1913 N    ALA  278 2015   1766    2793     74  218 1 1 5
ATOM     1914 CA   ALA  278 17.124   2.712   37.464 1.000 16.75
ANISOU   1914 CA   ALA  278 2200   1566    2600    216  146   - 2
ATOM     1915 C    ALA  278 17.575   1.523   38.313 1.000 16.31
ANISOU   1915 C    ALA  278 1849   1553    2794   -337 -196 1 0 7
ATOM     1916 O    ALA  278 17.718   1.635   39.523 1.000 17.26
ANISOU   1916 O    ALA  278 1963   1839    2754    -62  -53   2 0 5
ATOM     1917 CB   ALA  278 15.642   2.622   37.177 1.000 17.55
ANISOU   1917 CB   ALA  278 2109   1880    2679    295  195   - 1 1
ATOM     1918 N    ARG  279 17.724   0.362   37.696 1.000 17.07
ANISOU   1918 N    ARG  279 2322   1399    2766   -178   26 3 0 8
ATOM     1919 CA   ARG  279 18.099  -0.829   38.473 1.000 16.93
ANISOU   1919 CA   ARG  279 2377   1734    2323     15 -241   2 0 3
ATOM     1920 C    ARG  279 19.477  -0.587   39.098 1.000 19.87
ANISOU   1920 C    ARG  279 2491   2292    2766   -487 -384 5 4 3
ATOM     1921 O    ARG  279 19.687  -0.974   40.234 1.000 33.04
ANISOU   1921 O    ARG  279 3615   4823    4115  -1726 -1700  2 6 0 3
ATOM     1922 CB   ARG  279 18.164  -2.042   37.517 1.000 20.04
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ANISOU 1922 CB  ARG   279 2042      1609      3964    108  -221 -3 0 5
ATOM   1923 CG  ARG   279 16.742   -2.491   37.179 1.000 20.73
ANISOU 1923 CG  ARG   279 2152      2728      2997    -98  -401 -3 5 1
ATOM   1924 CD  ARG   279 16.601   -3.422   35.990 1.000 24.81
ANISOU 1924 CD  ARG   279 3213      2982      3231     -1  -507  -6 0 9
ATOM   1925 NE  ARG   279 17.575   -4.484   36.195 1.000 27.50
ANISOU 1925 NE  ARG   279 4331      2656      3463    355  -146 -1 8 1
ATOM   1926 CZ  ARG   279 17.301   -5.725   36.620 1.000 41.33
ANISOU 1926 CZ  ARG   279 7720      2466      5519   -186  -454 -1 4 2
ATOM   1927 NH1 ARG   279 16.024   -6.012   36.866 1.000 40.58
ANISOU 1927 NH1 ARG   279 8821      3012      3585  -1564   507  4 5 2
ATOM   1928 NH2 ARG   279 18.200   -6.688   36.807 1.000 53.27
ANISOU 1928 NH2 ARG   279 9516      2227      8496   -127 -4607  -4 6 3
ATOM   1929 N   GLU   280 20.390    0.119   38.424 1.000 19.68
ANISOU 1929 N   GLU   280 2172      2276      3028     84   324 1 3 6
ATOM   1930 CA  GLU   280 21.748    0.334   38.948 1.000 20.28
ANISOU 1930 CA  GLU   280 2046      2274      3385     25   581 1 1 5
ATOM   1931 C   GLU   280 21.705    1.257   40.182 1.000 20.67
ANISOU 1931 C   GLU   280 2334      1968      3552   -281   285  2 0
ATOM   1932 O   GLU   280 22.723    1.079   40.908 1.000 26.81
ANISOU 1932 O   GLU   280 2659      3419      4107    -37  -183  -8 7
ATOM   1933 CB  GLU   280 22.651    1.029   37.926 1.000 24.69
ANISOU 1933 CB  GLU   280 2778      2558      4044   -351  1022 3 0 3
ATOM   1934 CG  GLU   280 22.997    0.342   36.634 1.000 27.13
ANISOU 1934 CG  GLU   280 2605      4888      2816    596   116  6 2 3
ATOM   1935 CD  GLU   280 23.815    1.298   35.760 1.000 43.10
ANISOU 1935 CD  GLU   280 4693      7780      3903  -1328  1206 8 3 4
ATOM   1936 OE1 GLU   280 24.541    2.171   36.296 1.000 41.36
ANISOU 1936 OE1 GLU   280 2666      6033      7015     27  1099   6 9 0
ATOM   1937 OE2 GLU   280 23.727    1.219   34.520 1.000 64.81
ANISOU 1937 OE2 GLU   280 10844    10028      3751  -2356  1104 2 1 3 4
ATOM   1938 N   CYS   281 20.777    2.156   40.313 1.000 21.61
ANISOU 1938 N   CYS   281 2372      2240      3599   -211   532  -2 3 8
ATOM   1939 CA  CYS   281 20.481    3.164   41.337 1.000 24.33
ANISOU 1939 CA  CYS   281 2114      2911      4219   -526  1121 -8 1 7
ATOM   1940 C   CYS   281 19.858    2.568   42.585 1.000 27.11
ANISOU 1940 C   CYS   281 2492      3261      4546  -1608  1457 -1 3 4 3
ATOM   1941 O   CYS   281 19.789    3.161   43.685 1.000 19.19
ANISOU 1941 O   CYS   281 1997      2012      3282   -250  -326 1 3 5
ATOM   1942 CB  CYS   281 19.632    4.438   40.795 1.000 22.02
ANISOU 1942 CB  CYS   281 1214      3088      4063   -286   100  -2 1 0 8
ATOM   1943 SG  CYS   281 20.639    5.092   39.444 1.000 53.41
ANISOU 1943 SG  CYS   281 10822     4742      4730  -3261  1316 4 5
ATOM   1944 N   GLY   282 19.370    1.317   42.565 1.000 18.81
ANISOU 1944 N   GLY   282 1230      2224      3695      3  -149  -2 0 6
ATOM   1945 CA  GLY   282 18.675    0.750   43.744 1.000 17.07
ANISOU 1945 CA  GLY   282 1544      1771      3171     31  -552  -1 6 8
ATOM   1946 C   GLY   282 17.194    0.496   43.538 1.000 14.91
ANISOU 1946 C   GLY   282 1601      1645      2417   -135  -453 3 7 8
ATOM   1947 O   GLY   282 16.480   -0.062   44.380 1.000 16.38
ANISOU 1947 O   GLY   282 1998      1921      2306   -211  -399 3 6 0
ATOM   1948 N   PHE   283 16.625    0.919   42.404 1.000 13.44
ANISOU 1948 N   PHE   283 1563      1539      2006   -189  -336 -1 1 5
ATOM   1949 CA  PHE   283 15.173    0.829   42.203 1.000 14.52
ANISOU 1949 CA  PHE   283 1677      1410      2428   -187  -670 4 6
ATOM   1950 C   PHE   283 14.810   -0.604   41.809 1.000 13.08
ANISOU 1950 C   PHE   283 1519      1314      2137   -121  -338 1 7 4
ATOM   1951 O   PHE   283 15.311   -1.184   40.837 1.000 14.11
ANISOU 1951 O   PHE   283 1366      1418      2578   -142   -78  1 7
ATOM   1952 CB  PHE   283 14.749    1.800   41.078 1.000 13.76
ANISOU 1952 CB  PHE   283 1814      1288      2125    -39  -268 0
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ATOM    1953 CG   PHE  283 14.842   3.269    41.512 1.000 14.75
ANISOU  1953 CG   PHE  283 1985    1363     2255   12 -317  - 3
ATOM    1954 CD1  PHE  283 13.814   3.904    42.142 1.000 21.50
ANISOU  1954 CD1  PHE  283 2318    1759     4091   303  -23  -6 2 6
ATOM    1955 CD2  PHE  283 15.994   3.999    41.298 1.000 17.72
ANISOU  1955 CD2  PHE  283 2526    1244     2963   -307 -89  2 7 2
ATOM    1956 CE1  PHE  283 13.909   5.177    42.655 1.000 20.78
ANISOU  1956 CE1  PHE  283 2056    1802     4036   92 66  - 6 4 7
ATOM    1957 CE2  PHE  283 16.115   5.290    41.814 1.000 15.06
ANISOU  1957 CE2  PHE  283 2101    1257     2364   -5 -255  3 7 7
ATOM    1958 CZ   PHE  283 15.084   5.891    42.506 1.000 18.04
ANISOU  1958 CZ   PHE  283 1881    1995     2979   192  -432 2 0
ATOM    1959 N    ASP  284 13.883  -1.178    42.579 1.000 13.07
ANISOU  1959 N    ASP  284 1549    1366     2049   -73  -331 1 1 7
ATOM    1960 CA   ASP  284 13.502  -2.584    42.395 1.000 12.80
ANISOU  1960 CA   ASP  284 1481    1460     1924   -231 -207 1 5 7
ATOM    1961 C    ASP  284 12.335  -2.654    41.421 1.000 12.88
ANISOU  1961 C    ASP  284 1493    1508     1891   -19  -180 - 5 5
ATOM    1962 O    ASP  284 11.231  -3.147    41.741 1.000 13.69
ANISOU  1962 O    ASP  284 1407    1351     2442   -93  -281 9 2
ATOM    1963 CB   ASP  284 13.141  -3.203    43.744 1.000 14.10
ANISOU  1963 CB   ASP  284 1966    1534     1858   -40  -11  1 4 5
ATOM    1964 CG   ASP  284 13.165  -4.730    43.717 1.000 14.49
ANISOU  1964 CG   ASP  284 1906    1520     2079   47 -424  2 9 0
ATOM    1965 OD1  ASP  284 13.732  -5.305    42.758 1.000 14.81
ANISOU  1965 OD1  ASP  284 2036    1343     2250   -152 -166 2 3 1
ATOM    1966 OD2  ASP  284 12.652  -5.310    44.696 1.000 15.32
ANISOU  1966 OD2  ASP  284 1979    1557     2286   -79  -109 1 5 3
ATOM    1967 N    VAL  285 12.644  -2.191    40.217 1.000 12.40
ANISOU  1967 N    VAL  285 1582    1260     1870   79 -185  - 1 3 1
ATOM    1968 CA   VAL  285 11.599  -2.064    39.216 1.000 12.31
ANISOU  1968 CA   VAL  285 1442    1469     1767   -161 -59   - 1
ATOM    1969 C    VAL  285 11.229  -3.419    38.589 1.000 12.09
ANISOU  1969 C    VAL  285 1220    1407     1967   -1 -100  - 7 9
ATOM    1970 O    VAL  285 12.085  -4.311    38.433 1.000 13.68
ANISOU  1970 O    VAL  285 1237    1514     2446   67 56 4 0
ATOM    1971 CB   VAL  285 12.009  -1.066    38.098 1.000 14.68
ANISOU  1971 CB   VAL  285 1943    1621     2014   -163 -50  2 5 9
ATOM    1972 CG1  VAL  285 12.131   0.332    38.672 1.000 17.08
ANISOU  1972 CG1  VAL  285 2429    1402     2658   18 -465  4 2 5
ATOM    1973 CG2  VAL  285 13.309  -1.499    37.433 1.000 15.69
ANISOU  1973 CG2  VAL  285 2131    2180     1649   -316  161  3 0 6
ATOM    1974 N    SER  286 9.952   -3.541    38.241 1.000 12.24
ANISOU  1974 N    SER  286 1263    1440     1946   -12  -148 -1 1 7
ATOM    1975 CA   SER  286 9.398   -4.669    37.495 1.000 12.84
ANISOU  1975 CA   SER  286 1571    1463     1845   -356 -30  1 4
ATOM    1976 C    SER  286 8.861   -4.118    36.172 1.000 11.99
ANISOU  1976 C    SER  286 1516    1374     1666   -28  60 -1 9 8
ATOM    1977 O    SER  286 7.654   -4.110    35.917 1.000 15.68
ANISOU  1977 O    SER  286 1514    2384     2059   2  18 - 2 0
ATOM    1978 CB   SER  286 8.301   -5.327    38.300 1.000 12.54
ANISOU  1978 CB   SER  286 1407    1442     1915   -59  170  - 5 5
ATOM    1979 OG   SER  286 7.415   -4.380    38.890 1.000 13.15
ANISOU  1979 OG   SER  286 1531    1430     2034   105  -73  - 5 9
ATOM    1980 N    LEU  287 9.769   -3.649    35.333 1.000 13.56
ANISOU  1980 N    LEU  287 1574    1521     2058   41 133 1 7 7
ATOM    1981 CA   LEU  287 9.451   -2.932    34.101 1.000 13.48
ANISOU  1981 CA   LEU  287 1812    1418     1891   -84  116  1 7
ATOM    1982 C    LEU  287 10.075  -3.654    32.908 1.000 15.12
ANISOU  1982 C    LEU  287 1945    1714     2086   32 233 - 3 1
ATOM    1983 O    LEU  287 11.277  -3.883    32.927 1.000 17.91
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ANISOU 1983 O    LEU 287 1885    2275    2645    109   300  - 275
ATOM   1984 CB   LEU 287 9.954   -1.480  34.118 1.000 14.37
ANISOU 1984 CB   LEU 287 1773    1380    2306    -34   248   1 0 7
ATOM   1985 CG   LEU 287 9.362   -0.603  35.231 1.000 14.32
ANISOU 1985 CG   LEU 287 1421    1496    2523    62 52  - 1 5 8
ATOM   1986 CD1  LEU 287 10.143  0.705   35.413 1.000 14.53
ANISOU 1986 CD1  LEU 287 1672    1444    2403    0    -146   1 4 3
ATOM   1987 CD2  LEU 287 7.921   -0.197  34.820 1.000 16.03
ANISOU 1987 CD2  LEU 287 1476    2035    2579    166   -100  - 7
ATOM   1988 N    ASP 288 9.256   -4.060  31.958 1.000 15.09
ANISOU 1988 N    ASP 288 2041    1611    2081    73 175  - 216
ATOM   1989 CA   ASP 288 9.764   -4.722  30.757 1.000 16.55
ANISOU 1989 CA   ASP 288 1992    2028    2268    29 335  - 314
ATOM   1990 C    ASP 288 10.437  -3.682  29.874 1.000 18.74
ANISOU 1990 C    ASP 288 2484    2597    2040    -231  97 8 1
ATOM   1991 O    ASP 288 9.998   -2.526  29.849 1.000 25.48
ANISOU 1991 O    ASP 288 3382    2433    3865    -322  639   3 4 6
ATOM   1992 CB   ASP 288 8.659   -5.490  30.060 1.000 19.23
ANISOU 1992 CB   ASP 288 2431    2414    2460    -209  258  - 7 2 0
ATOM   1993 CG   ASP 288 9.139   -6.468  29.000 1.000 19.50
ANISOU 1993 CG   ASP 288 2688    2223    2499    -49   393  - 5 5 2
ATOM   1994 OD1  ASP 288 10.173  -7.145  29.185 1.000 27.03
ANISOU 1994 OD1  ASP 288 3134    3038    4100    624   427  - 7 1 6
ATOM   1995 OD2  ASP 288 8.458   -6.566  27.955 1.000 31.00
ANISOU 1995 OD2  ASP 288 3596    4859    3325    307   -361 - 2 1 0 0
ATOM   1996 N    GLY 289 11.489  -4.035  29.137 1.000 22.68
ANISOU 1996 N    GLY 289 2960    2893    2765    -531  778   1 1 6
ATOM   1997 CA   GLY 289 12.008  -3.083  28.169 1.000 25.60
ANISOU 1997 CA   GLY 289 3678    3562    2486    -1469 558   1 1
ATOM   1998 C    GLY 289 12.988  -2.078  28.725 1.000 21.08
ANISOU 1998 C    GLY 289 2567    2916    2528    -485  353   1 5 0
ATOM   1999 O    GLY 289 13.411  -2.097  29.891 1.000 23.72
ANISOU 1999 O    GLY 289 3428    3219    2364    -1104 440   1 1 3
ATOM   2000 N    GLU 290 13.402  -1.168  27.818 1.000 18.32
ANISOU 2000 N    GLU 290 2246    2396    2319    -145  616  - 1 1 5
ATOM   2001 CA   GLU 290 14.538  -0.301  28.074 1.000 17.75
ANISOU 2001 CA   GLU 290 1912    2419    2412    97 770 - 3 6 7
ATOM   2002 C    GLU 290 14.261  1.058   28.696 1.000 17.90
ANISOU 2002 C    GLU 290 2180    2308    2313    50 711 - 2 9 7
ATOM   2003 O    GLU 290 15.143  1.619   29.353 1.000 17.58
ANISOU 2003 O    GLU 290 2525    2050    2104    -35   380   1 6 5
ATOM   2004 CB   GLU 290 15.341  -0.161  26.785 1.000 23.21
ANISOU 2004 CB   GLU 290 3184    2508    3126    -273  1753 - 4 6 7
ATOM   2005 CG   GLU 290 15.833  -1.492  26.226 1.000 24.55
ANISOU 2005 CG   GLU 290 3609    2992    2725    348   1232 - 7 4 3
ATOM   2006 CD   GLU 290 16.676  -2.280  27.221 1.000 30.03
ANISOU 2006 CD   GLU 290 3365    3708    4337    476   753  - 2 1 1
ATOM   2007 OE1  GLU 290 17.492  -1.684  27.947 1.000 40.04
ANISOU 2007 OE1  GLU 290 5043    6674    3498    525   36 - 1 2 2 6
ATOM   2008 OE2  GLU 290 16.622  -3.527  27.237 1.000 51.76
ANISOU 2008 OE2  GLU 290 8785    3812    7070    -12   -483 1 5 8 3
ATOM   2009 N    THR 291 13.064  1.578   28.486 1.000 18.14
ANISOU 2009 N    THR 291 2305    2486    2103    224   711  - 3 2 1
ATOM   2010 CA   THR 291 12.697  2.896   29.049 1.000 18.72
ANISOU 2010 CA   THR 291 2521    2080    2511    105   1131 6 6
ATOM   2011 C    THR 291 11.278  2.744   29.593 1.000 15.79
ANISOU 2011 C    THR 291 2178    1758    2064    134   538  - 5 0
ATOM   2012 O    THR 291 10.517  1.834   29.217 1.000 18.62
ANISOU 2012 O    THR 291 2764    1966    2344    -248  664  - 3 1 1
ATOM   2013 CB   THR 291 12.722  4.031   28.044 1.000 21.54
ANISOU 2013 CB   THR 291 3043    2625    2516    -164  891   3 6 2
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- 79 -

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ATOM    2014 OG1 THR  291 11.695   3.862  27.077 1.000 25.98
ANISOU  2014 OG1 THR  291  3160    4072    2641   -86   703   5 0 3
ATOM    2015 CG2 THR  291 14.048   4.115  27.292 1.000 24.20
ANISOU  2015 CG2 THR  291  3199    3832    2164  -445   930   5 3 3
ATOM    2016 N   ALA  292 10.959   3.658  30.492 1.000 14.84
ANISOU  2016 N   ALA  292  1637    1656    2347   200   429  -1 5 3
ATOM    2017 CA  ALA  292  9.675   3.657  31.179 1.000 13.84
ANISOU  2017 CA  ALA  292  1488    1477    2294   170   299   7 8
ATOM    2018 C   ALA  292  9.356   5.065  31.619 1.000 12.65
ANISOU  2018 C   ALA  292  1334    1564    1908    60   144 -1 3 9
ATOM    2019 O   ALA  292 10.228   5.939  31.710 1.000 14.27
ANISOU  2019 O   ALA  292  1529    1596    2295   -35   109   1 1 6
ATOM    2020 CB  ALA  292  9.670   2.754  32.414 1.000 14.02
ANISOU  2020 CB  ALA  292  1693    1580    2053    37    22 - 2 7
ATOM    2021 N   THR  293  8.054   5.258  31.916 1.000 13.54
ANISOU  2021 N   THR  293  1468    1617    2058   117   373  -1 1 8
ATOM    2022 CA  THR  293  7.605   6.546  32.424 1.000 13.40
ANISOU  2022 CA  THR  293  1565    1647    1877   152   209  -2 3 2
ATOM    2023 C   THR  293  7.407   6.482  33.952 1.000 12.09
ANISOU  2023 C   THR  293  1345    1322    1927   -62   326  - 1 2
ATOM    2024 O   THR  293  7.214   5.441  34.555 1.000 12.93
ANISOU  2024 O   THR  293  1385    1356    2170  -190   194   9 0
ATOM    2025 CB  THR  293  6.295   7.058  31.788 1.000 13.45
ANISOU  2025 CB  THR  293  1598    1579    1935    95   345 3 4 5
ATOM    2026 OG1 THR  293  5.273   6.112  32.117 1.000 13.75
ANISOU  2026 OG1 THR  293  1672    1570    1981   -12   314   1 3 5
ATOM    2027 CG2 THR  293  6.476   7.139  30.272 1.000 15.93
ANISOU  2027 CG2 THR  293  2121    2022    1911   255   434  3 3 7
ATOM    2028 N   PHE  294  7.241   7.661  34.544 1.000 12.81
ANISOU  2028 N   PHE  294  1607    1440    1822   -83   149  -1 5 1
ATOM    2029 CA  PHE  294  6.857   7.773  35.935 1.000 12.37
ANISOU  2029 CA  PHE  294  1332    1469    1899  -267   166  -2 8 9
ATOM    2030 C   PHE  294  5.556   7.022  36.184 1.000 12.36
ANISOU  2030 C   PHE  294  1336    1361    1999  -151    30 - 3 6
ATOM    2031 O   PHE  294  5.403   6.253  37.143 1.000 13.27
ANISOU  2031 O   PHE  294  1556    1410    2076  -191   183   4 6
ATOM    2032 CB  PHE  294  6.698   9.271  36.267 1.000 13.83
ANISOU  2032 CB  PHE  294  2039    1351    1866  -192   -29  -1 7 7
ATOM    2033 CG  PHE  294  6.306   9.488  37.711 1.000 13.10
ANISOU  2033 CG  PHE  294  1786    1216    1974  -125   -63  -2 4 4
ATOM    2034 CD1 PHE  294  7.207   9.411  38.749 1.000 17.41
ANISOU  2034 CD1 PHE  294  2132    2533    1952 -1012  -287 7 6
ATOM    2035 CD2 PHE  294  4.964   9.739  38.026 1.000 18.41
ANISOU  2035 CD2 PHE  294  2156    2263    2575   565   332   5 7
ATOM    2036 CE1 PHE  294  6.810   9.608  40.054 1.000 17.72
ANISOU  2036 CE1 PHE  294  2348    2296    2086  -308  -362 -1 3 6
ATOM    2037 CE2 PHE  294  4.591  10.010  39.324 1.000 19.37
ANISOU  2037 CE2 PHE  294  2078    2541    2740   330   232  -6 3 0
ATOM    2038 CZ  PHE  294  5.507   9.956  40.355 1.000 18.36
ANISOU  2038 CZ  PHE  294  2443    1678    2855  -394   -55  -2 4 5
ATOM    2039 N   GLN  295  4.588   7.205  35.246 1.000 12.59
ANISOU  2039 N   GLN  295  1248    1429    2106   -62    38 -1 6 8
ATOM    2040 CA  GLN  295  3.320   6.484  35.408 1.000 12.76
ANISOU  2040 CA  GLN  295  1266    1215    2365     7  -157  -1 1 7
ATOM    2041 C   GLN  295  3.512   4.984  35.318 1.000 12.24
ANISOU  2041 C   GLN  295  1449    1256    1944    10     1  - 7 3
ATOM    2042 O   GLN  295  2.922   4.238  36.101 1.000 13.61
ANISOU  2042 O   GLN  295  1323    1427    2424     7    85 1 5 5
ATOM    2043 CB  GLN  295  2.375   6.975  34.317 1.000 14.31
ANISOU  2043 CB  GLN  295  1227    1594    2616    81  -133   1 9 2
ATOM    2044 CG  GLN  295  1.062   6.256  34.249 1.000 14.03
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ANISOU 2044 CG  GLN  295 1391   1509   2430    -59   -300  4 7
ATOM   2045 CD  GLN  295 0.157  6.687  33.115 1.000 13.56
ANISOU 2045 CD  GLN  295 1305   1486   2361    133   -117 1 6 5
ATOM   2046 OE1 GLN  295 0.459  7.693  32.419 1.000 15.35
ANISOU 2046 OE1 GLN  295 1811   1651   2371    161    206  2 2 0
ATOM   2047 NE2 GLN  295 -0.982 6.026  32.943 1.000 15.04
ANISOU 2047 NE2 GLN  295 1225   1995   2493     75  -139  - 9 9
ATOM   2048 N   ASP  296 4.363  4.463  34.423 1.000 12.66
ANISOU 2048 N   ASP  296 1425   1396   1990    181   -112 - 1 1 0
ATOM   2049 CA  ASP  296 4.653  3.016  34.439 1.000 12.26
ANISOU 2049 CA  ASP  296 1628   1274   1755     53   -51 - 1 5 1
ATOM   2050 C   ASP  296 5.167  2.569  35.792 1.000 11.57
ANISOU 2050 C   ASP  296 1199   1300   1895    -82    30 - 2 2
ATOM   2051 O   ASP  296 4.854  1.460  36.224 1.000 13.08
ANISOU 2051 O   ASP  296 1534   1368   2070   -107    38 1 3 9
ATOM   2052 CB  ASP  296 5.709  2.634  33.399 1.000 14.18
ANISOU 2052 CB  ASP  296 1870   1700   1819    141    30 - 3 7 8
ATOM   2053 CG  ASP  296 5.295  2.848  31.952 1.000 13.32
ANISOU 2053 CG  ASP  296 1655   1557   1848    -58    67 2
ATOM   2054 OD1 ASP  296 4.110  2.725  31.601 1.000 15.83
ANISOU 2054 OD1 ASP  296 1680   1935   2402    -68   -126 - 1 8 9
ATOM   2055 OD2 ASP  296 6.212  3.098  31.114 1.000 15.27
ANISOU 2055 OD2 ASP  296 1757   1937   2106   -229    137 1 7 7
ATOM   2056 N   TRP  297 6.038  3.352  36.416 1.000 12.26
ANISOU 2056 N   TRP  297 1325   1403   1931    -34   -123 - 1 1 8
ATOM   2057 CA  TRP  297 6.683  2.960  37.656 1.000 12.82
ANISOU 2057 CA  TRP  297 1328   1599   1943   -104    -49 1 5 1
ATOM   2058 C   TRP  297 5.746  3.007  38.858 1.000 13.13
ANISOU 2058 C   TRP  297 1418   1580   1992     24   -23 1 8 5
ATOM   2059 O   TRP  297 5.565  2.030  39.584 1.000 14.03
ANISOU 2059 O   TRP  297 1554   1619   2159    102    137 3 2 0
ATOM   2060 CB  TRP  297 7.908  3.847  37.928 1.000 13.68
ANISOU 2060 CB  TRP  297 1130   1692   2376    -19   -169 1 5 1
ATOM   2061 CG  TRP  297 8.646  3.455  39.166 1.000 13.28
ANISOU 2061 CG  TRP  297 1143   1646   2255     91   -96 2 2
ATOM   2062 CD1 TRP  297 8.932  2.179  39.622 1.000 15.58
ANISOU 2062 CD1 TRP  297 1615   1689   2618    275   -544 - 7 7
ATOM   2063 CD2 TRP  297 9.144  4.353  40.189 1.000 14.69
ANISOU 2063 CD2 TRP  297 1327   1693   2562   -117   -219 5
ATOM   2064 NE1 TRP  297 9.583  2.265  40.840 1.000 15.34
ANISOU 2064 NE1 TRP  297 1378   1853   2598     70   -494 7 5
ATOM   2065 CE2 TRP  297 9.724  3.597  41.203 1.000 16.13
ANISOU 2065 CE2 TRP  297 1241   2009   2880    182   -676 - 1 9 6
ATOM   2066 CE3 TRP  297 9.094  5.756  40.284 1.000 22.13
ANISOU 2066 CE3 TRP  297 3040   1658   3712   -665  -1408 1 2 9
ATOM   2067 CZ2 TRP  297 10.318 4.180  42.316 1.000 18.45
ANISOU 2067 CZ2 TRP  297 2204   2387   2418     44   -326  - 3 3 1
ATOM   2068 CZ3 TRP  297 9.670  6.353  41.399 1.000 21.55
ANISOU 2068 CZ3 TRP  297 2916   2104   3167    -55   -752 - 4 5 8
ATOM   2069 CH2 TRP  297 10.258 5.546  42.397 1.000 23.53
ANISOU 2069 CH2 TRP  297 3298   2356   3285   -320  -1146 - 3 4 4
ATOM   2070 N   ILE  298 5.106  4.167  39.044 1.000 13.58
ANISOU 2070 N   ILE  298 1324   1726   2108    241   -167 1 2 7
ATOM   2071 CA  ILE  298 4.299  4.440  40.229 1.000 14.68
ANISOU 2071 CA  ILE  298 1413   2177   1986    -13   -161 - 2 0 8
ATOM   2072 C   ILE  298 2.841  4.054  40.121 1.000 12.02
ANISOU 2072 C   ILE  298 1455   1300   1813     56   -239  4 0 2
ATOM   2073 O   ILE  298 2.182  3.782  41.147 1.000 13.67
ANISOU 2073 O   ILE  298 1732   1582   1881    -23    -4 1 9 3
ATOM   2074 CB  ILE  298 4.428  5.914  40.673 1.000 19.45
ANISOU 2074 CB  ILE  298 2261   2446   2683   -699    237 - 8 3 5
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ATOM   2075 CG1 ILE  298 5.907   6.245   41.001 1.000 27.83
ANISOU 2075 CG1 ILE  298 2776    4275    3525  -1314 -556 -1030
ATOM   2076 CG2 ILE  298 3.679   6.319   41.929 1.000 25.05
ANISOU 2076 CG2 ILE  298 3770    3344    2405  -57   255  -983
ATOM   2077 CD1 ILE  298 6.368   5.628   42.306 1.000 43.32
ANISOU 2077 CD1 ILE  298 4561    7224    4674  -652 -1890 -117
ATOM   2078 N   GLY  299 2.317   3.980   38.893 1.000 12.16
ANISOU 2078 N   GLY  299 1432    1308    1879   78  -304  106
ATOM   2079 CA  GLY  299 0.918   3.741   38.670 1.000 12.98
ANISOU 2079 CA  GLY  299 1276    1279    2379  106  -188 -154
ATOM   2080 C   GLY  299 0.135   5.017   38.378 1.000 13.09
ANISOU 2080 C   GLY  299 1421    1403    2151  113  -231  118
ATOM   2081 O   GLY  299 0.738   6.025   38.017 1.000 14.00
ANISOU 2081 O   GLY  299 1713    1353    2252  122   289  -13
ATOM   2082 N   GLY  300 -1.183  4.917   38.447 1.000 13.08
ANISOU 2082 N   GLY  300 1325    1545    2099  146  -267 -145
ATOM   2083 CA  GLY  300 -2.075  5.966   37.992 1.000 13.45
ANISOU 2083 CA  GLY  300 1447    1521    2143  116  -415 -143
ATOM   2084 C   GLY  300 -2.519  6.972   39.042 1.000 12.94
ANISOU 2084 C   GLY  300 1098    1365    2456  -52  -407 -192
ATOM   2085 O   GLY  300 -3.262  7.875   38.672 1.000 13.39
ANISOU 2085 O   GLY  300 1321    1342    2423  -19  -217  -45
ATOM   2086 N   ASN  301 -1.973  6.845   40.254 1.000 13.35
ANISOU 2086 N   ASN  301 1494    1429    2151 -225  -232 -104
ATOM   2087 CA  ASN  301 -2.162  7.842   41.313 1.000 13.83
ANISOU 2087 CA  ASN  301 1590    1435    2230 -194   -38  -61
ATOM   2088 C   ASN  301 -0.837  8.254   41.885 1.000 12.46
ANISOU 2088 C   ASN  301 1676    1268    1791  -35  -142  -20
ATOM   2089 O   ASN  301 -0.007  7.405   42.169 1.000 13.89
ANISOU 2089 O   ASN  301 1831    1355    2093   73  -144  -13
ATOM   2090 CB  ASN  301 -3.075  7.238   42.360 1.000 16.01
ANISOU 2090 CB  ASN  301 1632    1909    2542   77  224  315
ATOM   2091 CG  ASN  301 -3.942  8.199   43.106 1.000 18.23
ANISOU 2091 CG  ASN  301 1986    2508    2435  190   152  -90
ATOM   2092 OD1 ASN  301 -4.973  8.690   42.614 1.000 17.44
ANISOU 2092 OD1 ASN  301 1606    1626    3394  -21   144  -190
ATOM   2093 ND2 ASN  301 -3.518  8.454   44.338 1.000 33.30
ANISOU 2093 ND2 ASN  301 2804    6923    2928 1012  -230 -1523
ATOM   2094 N   TYR  302 -0.595  9.564   42.073 1.000 12.96
ANISOU 2094 N   TYR  302 1662    1278    1985  -69   -21 -135
ATOM   2095 CA  TYR  302 0.674   9.948   42.702 1.000 13.48
ANISOU 2095 CA  TYR  302 1673    1259    2192 -130  -132  3 4
ATOM   2096 C   TYR  302 0.768   9.269   44.078 1.000 12.63
ANISOU 2096 C   TYR  302 1413    1293    2092   53   44  1 9
ATOM   2097 O   TYR  302 -0.218  9.151   44.806 1.000 14.15
ANISOU 2097 O   TYR  302 1332    1737    2305  -65   48  -27
ATOM   2098 CB  TYR  302 0.764  11.472   42.916 1.000 13.30
ANISOU 2098 CB  TYR  302 1635    1192    2226  -81   33  4 1
ATOM   2099 CG  TYR  302 1.159  12.143   41.619 1.000 12.02
ANISOU 2099 CG  TYR  302 1586    1103    1880  -59   -25 -271
ATOM   2100 CD1 TYR  302 2.501  12.233   41.275 1.000 13.11
ANISOU 2100 CD1 TYR  302 1633    1284    2066  -80   11  -18
ATOM   2101 CD2 TYR  302 0.235  12.709   40.739 1.000 12.52
ANISOU 2101 CD2 TYR  302 1576    1132    2049  -44   13 -127
ATOM   2102 CE1 TYR  302 2.933  12.822   40.119 1.000 12.29
ANISOU 2102 CE1 TYR  302 1581    1043    2045 -185   -84  -77
ATOM   2103 CE2 TYR  302 0.637  13.273   39.535 1.000 14.12
ANISOU 2103 CE2 TYR  302 1462    1443    2458 -241   15  325
ATOM   2104 CZ  TYR  302 1.983  13.347   39.241 1.000 12.69
ANISOU 2104 CZ  TYR  302 1483    1224    2113 -287   -91  1 0
ATOM   2105 OH  TYR  302 2.376  13.866   38.013 1.000 13.42
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ANISOU 2105 OH  TYR  302 1505    1469    2124    -93    33 146
ATOM   2106 N   VAL  303 1.956   8.855   44.450  1.000 13.92
ANISOU 2106 N   VAL  303 1406    1637    2246    153    88 9 9
ATOM   2107 CA  VAL  303 2.355   8.336   45.746  1.000 14.51
ANISOU 2107 CA  VAL  303 1838    1320    2355    -137  -391 - 7 4
ATOM   2108 C   VAL  303 3.498   9.244   46.239  1.000 15.23
ANISOU 2108 C   VAL  303 1404    1507    2876    -102  -105 -348
ATOM   2109 O   VAL  303 4.471   9.386   45.512  1.000 18.70
ANISOU 2109 O   VAL  303 1859    1861    3386    -239   326  - 5 0 4
ATOM   2110 CB  VAL  303 2.856   6.880   45.632  1.000 16.75
ANISOU 2110 CB  VAL  303 2140    1319    2905    16  -759   -123
ATOM   2111 CG1 VAL  303 3.279   6.401   47.017  1.000 19.53
ANISOU 2111 CG1 VAL  303 2185    1951    3284    232   -1054  1 48
ATOM   2112 CG2 VAL  303 1.723   5.956   45.125  1.000 17.82
ANISOU 2112 CG2 VAL  303 2476    1442    2852    -213  -558 - 4 0 6
ATOM   2113 N   ASN  304 3.349   9.900   47.378  1.000 14.07
ANISOU 2113 N   ASN  304 1409    1369    2566    -39   -407 - 8 6
ATOM   2114 CA  ASN  304 4.317   10.928  47.772  1.000 14.31
ANISOU 2114 CA  ASN  304 1474    1387    2578    -102  -424 - 5 5
ATOM   2115 C   ASN  304 5.450   10.397  48.637  1.000 13.75
ANISOU 2115 C   ASN  304 1360    1487    2378    34  -274   - 8 7
ATOM   2116 O   ASN  304 6.539   10.962  48.584  1.000 14.60
ANISOU 2116 O   ASN  304 1314    1795    2438    -34   -55   - 3 2 0
ATOM   2117 CB  ASN  304 3.589   12.035  48.551  1.000 14.26
ANISOU 2117 CB  ASN  304 1710    1214    2494    6   -303   176
ATOM   2118 CG  ASN  304 2.535   12.661  47.642  1.000 14.81
ANISOU 2118 CG  ASN  304 1551    1627    2449    23 -114   4 0 2
ATOM   2119 OD1 ASN  304 2.866   13.255  46.622  1.000 16.52
ANISOU 2119 OD1 ASN  304 1896    1746    2636    80 19 5 89
ATOM   2120 ND2 ASN  304 1.290   12.595  48.102  1.000 18.43
ANISOU 2120 ND2 ASN  304 1560    2980    2463    127   -10  1 9 9
ATOM   2121 N   ILE  305 5.175   9.413   49.463  1.000 16.36
ANISOU 2121 N   ILE  305 1546    1553    3117    -78   -503 2 6 6
ATOM   2122 CA  ILE  305 6.173   8.890   50.407  1.000 14.85
ANISOU 2122 CA  ILE  305 1670    1537    2436    165   -277 - 4 0
ATOM   2123 C   ILE  305 6.183   7.372   50.352  1.000 15.78
ANISOU 2123 C   ILE  305 1527    1555    2914    95 -438   - 5 1
ATOM   2124 O   ILE  305 5.231   6.736   49.886  1.000 17.54
ANISOU 2124 O   ILE  305 1463    1789    3412    -131  -404 5
ATOM   2125 CB  ILE  305 5.949   9.430   51.818  1.000 17.80
ANISOU 2125 CB  ILE  305 2167    1962    2634    -23   265   - 2 0 9
ATOM   2126 CG1 ILE  305 4.578   9.091   52.416  1.000 18.93
ANISOU 2126 CG1 ILE  305 1716    2948    2526    1  -218   -163
ATOM   2127 CG2 ILE  305 6.171   10.944  51.823  1.000 19.17
ANISOU 2127 CG2 ILE  305 2685    1863    2737    70 -534   - 4 0 5
ATOM   2128 CD1 ILE  305 4.415   9.459   53.863  1.000 21.28
ANISOU 2128 CD1 ILE  305 2521    2902    2662    19 452 - 7 1
ATOM   2129 N   ARG  306 7.246   6.806   50.908  1.000 14.59
ANISOU 2129 N   ARG  306 1738    1641    2165    52 -356   2 7 1
ATOM   2130 CA  ARG  306 7.424   5.360   50.828  1.000 15.25
ANISOU 2130 CA  ARG  306 1509    1663    2622    139   -302 7 7
ATOM   2131 C   ARG  306 8.234   4.903   52.024  1.000 15.02
ANISOU 2131 C   ARG  306 1588    1464    2656    133   -332 - 2 1
ATOM   2132 O   ARG  306 9.141   5.614   52.433  1.000 16.63
ANISOU 2132 O   ARG  306 1682    2101    2536    -219  -294 -168
ATOM   2133 CB  ARG  306 8.135   4.943   49.532  1.000 16.31
ANISOU 2133 CB  ARG  306 1820    1681    2697    -100  -270 -150
ATOM   2134 CG  ARG  306 8.226   3.414   49.377  1.000 18.43
ANISOU 2134 CG  ARG  306 2476    1700    2828    40 -194   -156
ATOM   2135 CD  ARG  306 8.401   3.068   47.900  1.000 18.26
ANISOU 2135 CD  ARG  306 2087    1971    2880    -120  -145 - 3 3 0
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ATOM    2136 NE   ARG   306 7.136    3.228   47.188 1.000 20.53
ANISOU  2136 NE   ARG   306 2442     2013    3345   -577  -668 -2 3 4
ATOM    2137 CZ   ARG   306 6.980    3.178   45.873 1.000 20.27
ANISOU  2137 CZ   ARG   306 2330     2057    3316   373   -522 2 0
ATOM    2138 NH1  ARG   306 8.086    3.000   45.107 1.000 22.13
ANISOU  2138 NH1  ARG   306 2136     2580    3695   274   -589 -7 2 3
ATOM    2139 NH2  ARG   306 5.759    3.250   45.341 1.000 18.44
ANISOU  2139 NH2  ARG   306 2107     1838    3062   259   -286 8 4
ATOM    2140 N    ARG   307 7.898    3.775   52.612 1.000 19.10
ANISOU  2140 N    ARG   307 2716     1872    2671   -294  -607 3 2 7
ATOM    2141 CA   ARG   307 8.576    3.212   53.768 1.000 21.13
ANISOU  2141 CA   ARG   307 3321     2201    2504   -48   -845 1 3 9
ATOM    2142 C    ARG   307 9.536    2.138   53.277 1.000 23.30
ANISOU  2142 C    ARG   307 3417     2170    3267   181   -1046 3 9
ATOM    2143 O    ARG   307 9.385    1.601   52.187 1.000 21.01
ANISOU  2143 O    ARG   307 2574     2355    3052   174   -728 1 1 2
ATOM    2144 CB   ARG   307 7.557    2.522   54.694 1.000 27.30
ANISOU  2144 CB   ARG   307 4545     3184    2645   -13   -247 7 0 5
ATOM    2145 CG   ARG   307 6.839    3.488   55.629 1.000 46.30
ANISOU  2145 CG   ARG   307 6310     6374    4907   215   1655 -9 7 0
ATOM    2146 CD   ARG   307 7.054    3.085   57.085 1.000 66.50
ANISOU  2146 CD   ARG   307 11107    10355   3806   -2980 2792 -1145
ATOM    2147 NE   ARG   307 5.989    2.203   57.531 1.000 78.91
ANISOU  2147 NE   ARG   307 11821    12833   5330   -4530 1969 - 5
ATOM    2148 CZ   ARG   307 5.987    1.285   58.479 1.000 73.67
ANISOU  2148 CZ   ARG   307 7704     14382   5907   -4724 1249 1051
ATOM    2149 NH1  ARG   307 7.063    1.038   59.214 1.000 80.32
ANISOU  2149 NH1  ARG   307 6613     17949   5955   -3290 2179 1 0 5
ATOM    2150 NH2  ARG   307 4.872    0.597   58.707 1.000 73.74
ANISOU  2150 NH2  ARG   307 9116     15919   2983   -6954 438  -9 1 7
ATOM    2151 N    THR   308 10.551   1.861   54.113 1.000 25.61
ANISOU  2151 N    THR   308 4234     2212    3285   536   -1421 - 2 3 2
ATOM    2152 CA   THR   308 11.308   0.640   53.822 1.000 30.02
ANISOU  2152 CA   THR   308 3468     1939    5998   225   -1629 -1 9 4
ATOM    2153 C    THR   308 10.468   -0.611  54.030 1.000 25.42
ANISOU  2153 C    THR   308 2915     2190    4552   453   -626 -3 2 1
ATOM    2154 O    THR   308 9.523    -0.768  54.787 1.000 30.10
ANISOU  2154 O    THR   308 4042     3482    3912   614   -217 -1 2 5
ATOM    2155 CB   THR   308 12.581   0.531   54.688 1.000 26.09
ANISOU  2155 CB   THR   308 2701     3586    3626   242   -361 -4 5 6
ATOM    2156 OG1  THR   308 12.140   0.751   56.028 1.000 32.90
ANISOU  2156 OG1  THR   308 4146     4188    4167   504   745  -4 9 5
ATOM    2157 CG2  THR   308 13.577   1.594   54.256 1.000 31.43
ANISOU  2157 CG2  THR   308 3193     4702    4047   -577  -132 -5 3 8
ATOM    2158 N    SER   309 10.850   -1.591  53.217 1.000 24.73
ANISOU  2158 N    SER   309 2934     2092    4370   94 -574  - 3 9 1
ATOM    2159 CA   SER   309 10.199   -2.897  53.230 1.000 25.19
ANISOU  2159 CA   SER   309 3793     2464    3316   -485  451  - 2 3 0
ATOM    2160 C    SER   309 10.466   -3.691  54.512 1.000 24.06
ANISOU  2160 C    SER   309 2360     2888    3893   302   107  3 5
ATOM    2161 O    SER   309 11.565   -3.621  55.084 1.000 34.54
ANISOU  2161 O    SER   309 3626     2131    7366   -76   -1944 - 3 4
ATOM    2162 CB   SER   309 10.639   -3.700  52.012 1.000 26.52
ANISOU  2162 CB   SER   309 3970     2159    3948   167   580  - 3 6 6
ATOM    2163 OG   SER   309 10.217   -5.039  52.148 1.000 26.34
ANISOU  2163 OG   SER   309 3198     2207    4604   156   -844 -2 6 0
ATOM    2164 N    LYS   310 9.494    -4.458  54.961 1.000 24.99
ANISOU  2164 N    LYS   310 3172     2459    3864   160   262  3 6 6
ATOM    2165 CA   LYS   310 9.651    -5.339  56.125 1.000 28.38
ANISOU  2165 CA   LYS   310 4191     3167    3427   764   278  2 8 1
ATOM    2166 C    LYS   310 9.941    -6.768  55.711 1.000 26.07
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ANISOU 2166 C   LYS 310 3371    2687    3846   168   -290  5 7 7
ATOM   2167 O   LYS 310 10.150  -7.684  56.515 1.000 33.48
ANISOU 2167 O   LYS 310 5267    3056    4400   -66   -450 10 7 3
ATOM   2168 CB  LYS 310 8.299   -5.367  56.858 1.000 37.77
ANISOU 2168 CB  LYS 310 5736    4695    3921   299   1818 1 8
ATOM   2169 CG  LYS 310 8.014   -4.214  57.806 1.000 40.55
ANISOU 2169 CG  LYS 310 6395    4716    4295   1525  1524 1 0 1
ATOM   2170 CD  LYS 310 6.798   -4.587  58.649 1.000 44.24
ANISOU 2170 CD  LYS 310 9091    4224    3495   1053  2816 5 8 4
ATOM   2171 CE  LYS 310 6.722   -6.109  58.818 1.000 59.12
ANISOU 2171 CE  LYS 310 9281    4577    8606   766   -82  2 4 7 8
ATOM   2172 NZ  LYS 310 6.088   -6.563  60.089 1.000 55.80
ANISOU 2172 NZ  LYS 310 4884    5742    10577  287   -947 4 7 9 6
ATOM   2173 N   ALA 311 9.896   -7.030  54.410 1.000 22.45
ANISOU 2173 N   ALA 311 2190    2402    3939   10 52 2 6 9
ATOM   2174 CA  ALA 311 10.360  -8.369  53.972 1.000 31.89
ANISOU 2174 CA  ALA 311 3771    2594    5753   434   -516 - 4 2 1
ATOM   2175 C   ALA 311 11.909  -8.459  53.833 1.000 23.30
ANISOU 2175 C   ALA 311 3907    2328    2616   1393  -593 1 1 2
ATOM   2176 CB  ALA 311 9.619   -8.665  52.674 1.000 27.94
ANISOU 2176 CB  ALA 311 2407    2878    5329   -355  542  - 6 7 2
ATOM   2177 OW  HOH 501 -6.477  10.237  44.256 1.000 15.66
ATOM   2178 OW  HOH 502 -9.349  16.189  51.010 1.000 19.26
ATOM   2179 OW  HOH 503 -1.489  3.653   34.560 1.000 15.78
ATOM   2180 OW  HOH 504 -10.499 18.731  50.182 1.000 16.19
ATOM   2181 OW  HOH 505 -8.612  16.958  47.640 1.000 17.30
ATOM   2182 OW  HOH 506 -10.255 20.839  42.881 1.000 19.05
ATOM   2183 OW  HOH 507 2.096   1.076   32.810 1.000 29.32
ATOM   2184 OW  HOH 508 -0.284  4.743   41.885 1.000 13.93
ATOM   2185 OW  HOH 509 -8.525  18.553  42.416 1.000 21.33
ATOM   2186 OW  HOH 510 3.165   2.604   43.488 1.000 24.59
ATOM   2187 OW  HOH 511 -6.282  19.386  52.341 1.000 18.98
ATOM   2188 OW  HOH 512 -6.826  24.638  46.833 1.000 21.77
ATOM   2189 OW  HOH 513 10.510  -4.344  46.092 1.000 25.88
ATOM   2190 OW  HOH 514 -0.806  16.964  40.372 1.000 16.54
ATOM   2191 OW  HOH 515 -1.269  18.855  42.411 1.000 15.76
ATOM   2192 OW  HOH 516 14.277  -5.146  40.175 1.000 15.53
ATOM   2193 OW  HOH 517 -0.123  21.538  40.640 1.000 17.22
ATOM   2194 OW  HOH 518 13.131  -0.967  51.791 1.000 31.17
ATOM   2195 OW  HOH 519 11.009  2.875   45.599 1.000 20.20
ATOM   2196 OW  HOH 520 5.789   13.543  45.996 1.000 17.36
ATOM   2197 OW  HOH 521 2.168   19.767  55.925 1.000 20.41
ATOM   2198 OW  HOH 522 8.487   15.960  34.949 1.000 15.40
ATOM   2199 OW  HOH 523 10.794  12.697  29.921 1.000 19.99
ATOM   2200 OW  HOH 524 -11.722 19.112  44.516 1.000 19.82
ATOM   2201 OW  HOH 525 1.672   -2.081  35.124 1.000 16.29
ATOM   2202 OW  HOH 526 9.651   15.283  32.342 1.000 20.37
ATOM   2203 OW  HOH 527 28.749  31.187  52.019 1.000 18.53
ATOM   2204 OW  HOH 528 15.326  11.252  32.041 1.000 19.60
ATOM   2205 OW  HOH 529 26.897  26.984  52.035 1.000 19.86
ATOM   2206 OW  HOH 530 13.528  11.592  50.915 1.000 16.17
ATOM   2207 OW  HOH 531 25.631  32.409  52.682 1.000 19.20
ATOM   2208 OW  HOH 532 18.287  6.835   52.185 1.000 18.49
ATOM   2209 OW  HOH 533 12.635  29.035  39.395 1.000 18.09
ATOM   2210 OW  HOH 534 10.797  31.968  45.659 1.000 20.66
ATOM   2211 OW  HOH 535 10.167  24.890  33.567 1.000 19.12
ATOM   2212 OW  HOH 536 23.530  24.122  58.531 1.000 20.39
ATOM   2213 OW  HOH 537 23.358  12.639  35.292 1.000 22.61
ATOM   2214 OW  HOH 538 25.879  28.699  50.264 1.000 19.44
ATOM   2215 OW  HOH 539 11.674  16.559  30.502 1.000 18.57
ATOM   2216 OW  HOH 540 18.515  27.775  40.042 1.000 22.23
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ATOM	2217	OW	HOH	541	21.233	20.367	33.996	1.000	21.45
ATOM	2218	OW	HOH	542	22.826	32.643	53.094	1.000	19.38
ATOM	2219	OW	HOH	543	19.670	22.387	35.310	1.000	20.05
ATOM	2220	OW	HOH	544	-13.591	21.996	61.494	1.000	49.93
ATOM	2221	OW	HOH	545	21.295	11.783	55.080	1.000	20.04
ATOM	2222	OW	HOH	546	5.431	2.533	51.677	1.000	28.11
ATOM	2223	OW	HOH	547	17.311	25.489	32.148	1.000	24.38
ATOM	2224	OW	HOH	548	17.427	7.744	33.008	1.000	20.78
ATOM	2225	OW	HOH	549	11.656	23.874	58.194	1.000	23.39
ATOM	2226	OW	HOH	550	8.037	14.987	53.326	1.000	33.52
ATOM	2227	OW	HOH	551	1.354	14.574	33.889	1.000	21.05
ATOM	2228	OW	HOH	552	11.203	20.116	63.686	1.000	24.59
ATOM	2229	OW	HOH	553	2.671	21.240	34.245	1.000	34.51
ATOM	2230	OW	HOH	554	6.339	19.832	30.751	1.000	26.36
ATOM	2231	OW	HOH	555	26.611	24.519	55.570	1.000	21.22
ATOM	2232	OW	HOH	556	27.669	17.156	53.039	1.000	25.86
ATOM	2233	OW	HOH	557	-14.392	19.977	44.154	1.000	25.03
ATOM	2234	OW	HOH	558	14.828	32.652	51.443	1.000	25.23
ATOM	2235	OW	HOH	559	17.937	7.207	54.915	1.000	20.59
ATOM	2236	OW	HOH	560	10.729	-8.875	31.499	1.000	24.65
ATOM	2237	OW	HOH	561	6.455	2.298	42.613	1.000	22.74
ATOM	2238	OW	HOH	562	13.784	31.245	44.166	1.000	27.75
ATOM	2239	OW	HOH	563	17.292	33.470	53.556	1.000	25.28
ATOM	2240	OW	HOH	564	11.210	1.109	49.697	1.000	23.33
ATOM	2241	OW	HOH	565	-11.339	25.246	41.370	1.000	26.08
ATOM	2242	OW	HOH	566	20.363	-8.375	38.242	1.000	30.07
ATOM	2243	OW	HOH	567	3.890	24.604	35.837	1.000	25.86
ATOM	2244	OW	HOH	568	5.334	11.875	43.937	1.000	25.45
ATOM	2245	OW	HOH	569	7.861	22.385	64.046	1.000	28.98
ATOM	2246	OW	HOH	570	7.754	-1.508	30.848	1.000	24.72
ATOM	2247	OW	HOH	571	6.297	3.583	28.471	1.000	33.06
ATOM	2248	OW	HOH	572	-15.790	28.800	51.855	1.000	30.09
ATOM	2249	OW	HOH	573	-5.388	20.310	38.883	1.000	23.64
ATOM	2250	OW	HOH	574	17.657	21.059	29.053	1.000	24.31
ATOM	2251	OW	HOH	575	8.763	20.920	66.102	1.000	24.81
ATOM	2252	OW	HOH	576	10.135	27.617	58.357	1.000	25.12
ATOM	2253	OW	HOH	577	7.795	1.060	29.730	1.000	29.00
ATOM	2254	OW	HOH	578	22.601	19.580	61.946	1.000	28.66
ATOM	2255	OW	HOH	579	8.859	4.744	27.898	1.000	26.12
ATOM	2256	OW	HOH	580	4.937	3.932	48.882	1.000	26.29
ATOM	2257	OW	HOH	581	17.096	5.891	35.057	1.000	23.31
ATOM	2258	OW	HOH	582	-16.337	31.047	64.719	1.000	54.01
ATOM	2259	OW	HOH	583	7.652	24.826	52.106	1.000	27.23
ATOM	2260	OW	HOH	584	7.174	24.915	29.292	1.000	26.60
ATOM	2261	OW	HOH	585	23.452	10.614	55.439	1.000	26.42
ATOM	2262	OW	HOH	586	12.640	26.413	58.676	1.000	27.15
ATOM	2263	OW	HOH	587	6.204	21.166	62.094	1.000	24.65
ATOM	2264	OW	HOH	588	2.385	0.810	37.616	1.000	19.92
ATOM	2265	OW	HOH	589	32.930	28.236	45.738	1.000	38.29
ATOM	2266	OW	HOH	590	-12.045	28.716	45.065	1.000	30.46
ATOM	2267	OW	HOH	591	0.219	13.612	36.120	1.000	27.12
ATOM	2268	OW	HOH	592	-2.525	3.881	43.344	1.000	26.67
ATOM	2269	OW	HOH	593	7.533	13.297	48.055	1.000	19.59
ATOM	2270	OW	HOH	594	-1.575	28.355	42.057	1.000	25.53
ATOM	2271	OW	HOH	595	11.209	-1.188	46.425	1.000	22.12
ATOM	2272	OW	HOH	596	5.684	-7.000	28.451	1.000	27.97
ATOM	2273	OW	HOH	597	28.868	19.406	51.825	1.000	27.72
ATOM	2274	OW	HOH	598	13.432	2.493	57.904	1.000	31.12
ATOM	2275	OW	HOH	599	8.196	7.483	27.148	1.000	29.99
ATOM	2276	OW	HOH	600	20.809	19.088	63.369	1.000	36.86
ATOM	2277	OW	HOH	601	21.352	10.656	34.614	1.000	30.60

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ATOM  2278 OW   HOH  602 2.891    7.196   30.899 1.000 25.41
ATOM  2279 OW   HOH  603 8.260    26.496  34.561 1.000 35.71
ATOM  2280 OW   HOH  604 22.300   13.959  31.378 1.000 32.53
ATOM  2281 OW   HOH  605 15.689   35.750  48.870 1.000 31.17
ATOM  2282 OW   HOH  606 7.219    15.638  30.914 1.000 27.80
ATOM  2283 OW   HOH  607 -3.237   14.604  47.092 1.000 20.96
ATOM  2284 OW   HOH  608 17.543   10.581  33.561 1.000 23.51
ATOM  2285 OW   HOH  609 -1.899   36.370  44.261 1.000 32.64
ATOM  2286 OW   HOH  610 26.095   14.431  43.803 1.000 19.19
ATOM  2287 OW   HOH  611 27.664   13.183  41.954 1.000 26.48
ATOM  2288 OW   HOH  612 4.302    34.604  49.981 1.000 24.70
ATOM  2289 OW   HOH  613 -15.580  27.012  46.728 1.000 42.45
ATOM  2290 OW   HOH  614 1.615    35.544  50.347 1.000 23.78
ATOM  2291 OW   HOH  615 -10.137  34.259  49.033 1.000 23.94
ATOM  2292 OW   HOH  616 26.084   6.502   57.657 1.000 39.32
ATOM  2293 OW   HOH  617 -15.962  20.656  46.340 1.000 25.94
ATOM  2294 OW   HOH  618 6.113    29.517  40.143 1.000 29.43
ATOM  2295 OW   HOH  619 19.797   4.627   51.313 1.000 27.15
ATOM  2296 OW   HOH  620 -1.748   11.315  48.716 1.000 21.83
ATOM  2297 OW   HOH  621 11.099   34.289  44.259 1.000 27.15
ATOM  2298 OW   HOH  622 28.352   14.351  37.877 1.000 41.48
ATOM  2299 OW   HOH  623 -2.826   36.968  57.149 1.000 32.75
ATOM  2300 OW   HOH  624 16.983   9.258   29.962 1.000 32.82
ATOM  2301 OW   HOH  625 16.780   29.213  38.384 1.000 27.96
ATOM  2302 OW   HOH  626 1.632    17.213  33.689 1.000 23.17
ATOM  2303 OW   HOH  627 33.536   23.640  45.028 1.000 41.91
ATOM  2304 OW   HOH  628 23.821   6.059   50.174 1.000 34.22
ATOM  2305 OW   HOH  629 3.482    2.785   46.751 1.000 39.07
ATOM  2306 OW   HOH  630 20.218   24.803  60.918 1.000 50.12
ATOM  2307 OW   HOH  631 3.366    16.272  30.698 1.000 31.50
ATOM  2308 OW   HOH  632 18.871   11.791  31.384 1.000 30.78
ATOM  2309 OW   HOH  633 4.455    25.782  58.823 1.000 32.14
ATOM  2310 OW   HOH  634 24.721   5.202   40.319 1.000 40.13
ATOM  2311 OW   HOH  635 19.623   35.238  43.466 1.000 50.48
ATOM  2312 OW   HOH  636 22.789   26.242  60.797 1.000 26.58
ATOM  2313 OW   HOH  637 7.008    -4.809  54.039 1.000 33.89
ATOM  2314 OW   HOH  638 -15.821  18.362  42.559 1.000 29.61
ATOM  2315 OW   HOH  639 -11.847  15.711  52.841 1.000 25.21
ATOM  2316 OW   HOH  640 -1.948   13.411  35.401 1.000 30.41
ATOM  2317 OW   HOH  641 -14.293  21.937  42.145 1.000 27.58
ATOM  2318 OW   HOH  642 18.216   20.839  66.863 1.000 31.23
ATOM  2319 OW   HOH  643 9.836    36.288  48.178 1.000 44.21
ATOM  2320 OW   HOH  644 3.510    16.168  66.253 1.000 33.82
ATOM  2321 OW   HOH  645 7.571    33.398  41.687 1.000 37.96
ATOM  2322 OW   HOH  646 0.780    21.844  36.729 1.000 31.71
ATOM  2323 OW   HOH  647 21.244   -2.321  35.579 1.000 32.40
ATOM  2324 OW   HOH  648 3.027    25.244  69.907 1.000 36.84
ATOM  2325 OW   HOH  649 1.129    25.273  66.516 1.000 35.42
ATOM  2326 OW   HOH  650 14.646   7.560   60.327 1.000 46.42
ATOM  2327 OW   HOH  651 -8.287   26.381  37.998 1.000 29.17
ATOM  2328 OW   HOH  652 10.153   23.548  67.703 1.000 31.50
ATOM  2329 OW   HOH  653 28.906   22.258  38.969 1.000 32.66
ATOM  2330 OW   HOH  654 13.568   -4.482  31.517 1.000 26.94
ATOM  2331 OW   HOH  655 -12.635  17.106  55.637 1.000 26.85
ATOM  2332 OW   HOH. 656 2.698    5.770   50.702 1.000 29.05
ATOM  2333 OW   HOH  657 -1.384   7.487   46.512 1.000 36.52
ATOM  2334 OW   HOH  658 3.880    19.246  31.498 1.000 31.50
ATOM  2335 OW   HOH  659 -1.400   31.406  64.001 1.000 56.62
ATOM  2336 OW   HOH  660 11.416   23.260  65.229 1.000 32.69
ATOM  2337 OW   HOH  661 15.994   14.673  25.680 1.000 36.46
ATOM  2338 OW   HOH  662 28.572   21.242  53.423 1.000 39.06
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- 87 -

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ATOM  2339 OW   HOH  663 19.354   0.465   27.273 1.000 44.56
ATOM  2340 OW   HOH  664 24.969  27.026   38.838 1.000 35.41
ATOM  2341 OW   HOH  665 24.294   7.488   55.914 1.000 32.97
ATOM  2342 OW   HOH  666 19.540   7.882   31.178 1.000 30.04
ATOM  2343 OW   HOH  667 -9.236  32.988   57.241 1.000 39.20
ATOM  2344 OW   HOH  668  2.098  18.351   67.496 1.000 38.88
ATOM  2345 OW   HOH  669 11.390   3.245   56.270 1.000 37.56
ATOM  2346 OW   HOH  670 -21.413 24.449   52.026 1.000 44.66
ATOM  2347 OW   HOH  671 -14.575 19.220   55.240 1.000 30.91
ATOM  2348 OW   HOH  672 32.112  25.958   43.051 1.000 33.34
ATOM  2349 OW   HOH  673 -15.050 31.151   53.232 1.000 34.71
ATOM  2350 OW   HOH  674  2.941  -1.607   30.245 1.000 34.63
ATOM  2351 OW   HOH  675 26.951  14.544   34.757 1.000 49.17
ATOM  2352 OW   HOH  676 14.707  30.669   39.386 1.000 30.55
ATOM  2353 OW   HOH  677  5.203  18.009   68.080 1.000 43.41
ATOM  2354 OW   HOH  678 14.151   7.965   26.591 1.000 38.80
ATOM  2355 OW   HOH  679 24.470  24.261   41.443 1.000 31.28
ATOM  2356 OW   HOH  680 17.540   2.410   28.478 1.000 34.31
ATOM  2357 OW   HOH  681 25.992  20.593   34.326 1.000 39.66
ATOM  2358 OW   HOH  682 13.802  35.357   44.421 1.000 34.06
ATOM  2359 OW   HOH  683  1.087   2.355   45.456 1.000 35.39
ATOM  2360 OW   HOH  684 22.443  34.538   42.053 1.000 33.55
ATOM  2361 OW   HOH  685  4.419   4.720   27.356 1.000 48.02
ATOM  2362 OW   HOH  686 -15.830 34.507   51.877 1.000 50.63
ATOM  2363 OW   HOH  687 -15.217 29.490   48.887 1.000 33.54
ATOM  2364 OW   HOH  688 36.808  21.183   46.206 1.000 44.97
ATOM  2365 OW   HOH  689  3.756   1.312   29.272 1.000 35.16
ATOM  2366 OW   HOH  690 18.802  13.646   27.901 1.000 30.08
ATOM  2367 OW   HOH  691  6.997  17.521   29.313 1.000 47.70
ATOM  2368 OW   HOH  692 13.725  16.327   69.105 1.000 36.97
ATOM  2369 OW   HOH  693 22.369  22.161   60.503 1.000 44.09
ATOM  2370 OW   HOH  694 -5.429  31.620   42.219 1.000 33.40
ATOM  2371 OW   HOH  695 19.351  23.082   30.744 1.000 34.21
ATOM  2372 OW   HOH  696  6.897  22.414   29.376 1.000 36.59
ATOM  2373 OW   HOH  697 28.700   7.809   57.304 1.000 38.35
ATOM  2374 OW   HOH  698  3.224   0.679   39.819 1.000 24.13
ATOM  2375 OW   HOH  699 -4.634  33.717   62.593 1.000 32.26
ATOM  2376 OW   HOH  700 32.423  17.018   43.200 1.000 43.20
ATOM  2377 OW   HOH  701 12.119  25.228   68.342 1.000 39.95
ATOM  2378 OW   HOH  702  9.307  16.477   28.976 1.000 31.75
ATOM  2379 OW   HOH  703 -11.313 34.067   46.117 1.000 49.40
ATOM  2380 OW   HOH  704  7.774  31.390   65.371 1.000 39.12
ATOM  2381 OW   HOH  705 24.764   7.530   36.802 1.000 38.55
ATOM  2382 OW   HOH  706 -22.095 25.669   59.047 1.000 36.71
ATOM  2383 OW   HOH  707 14.509   9.840   68.854 1.000 50.38
ATOM  2384 OW   HOH  708 -10.129 28.722   42.036 1.000 38.92
ATOM  2385 OW   HOH  709 29.011  34.910   48.390 1.000 35.29
ATOM  2386 OW   HOH  710 15.822  31.612   42.021 1.000 33.61
ATOM  2387 OW   HOH  711 -1.996  17.676   33.645 1.000 49.57
ATOM  2388 OW   HOH  712 10.216  17.748   26.015 1.000 41.04
ATOM  2389 OW   HOH  713 23.535  29.642   37.371 1.000 43.47
ATOM  2390 OW   HOH  714 20.488  -7.214   35.599 1.000 45.99
ATOM  2391 OW   HOH  715 11.411  10.149   25.081 1.000 41.63
ATOM  2392 OW   HOH  716 19.329  -4.258   34.139 1.000 42.50
ATOM  2393 OW   HOH  717 13.688  26.799   66.321 1.000 43.74
ATOM  2394 OW   HOH  718 -10.751 33.064   54.747 1.000 40.47
ATOM  2395 OW   HOH  719 13.800  18.258   70.756 1.000 34.54
ATOM  2396 OW   HOH  720 17.151   5.815   28.003 1.000 40.80
ATOM  2397 OW   HOH  721  0.000   0.000   36.691 0.330 27.42
ATOM  2398 OW   HOH  722  0.000   0.000   41.559 0.330 37.77
ATOM  2399 OW   HOH  723 15.314   7.549   28.791 1.000 36.24
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ATOM   2400  OW  HOH  724  -1.663   19.944   39.196  1.000  33.87
ATOM   2401  OW  HOH  725  19.289   24.195   33.321  1.000  32.28
ATOM   2402  OW  HOH  726  0.000    0.000    31.798  0.330  50.38
ATOM   2403  OW  HOH  727  -1.223   38.165   59.229  1.000  31.24
ATOM   2404  OW  HOH  728  22.035   38.254   45.742  1.000  48.21
ATOM   2405  OW  HOH  729  28.388   16.248   63.044  1.000  31.59
ATOM   2406  OW  HOH  730  0.000    0.000    45.995  0.330  36.14
ATOM   2407  OW  HOH  731  2.984    29.007   40.091  1.000  36.08
ATOM   2408  OW  HOH  732  5.297    15.835   27.318  1.000  41.53
ATOM   2409  OW  HOH  733  17.347   10.778   27.373  1.000  35.27
ATOM   2410  OW  HOH  734  29.417   14.607   53.127  1.000  40.12
ATOM   2411  OW  HOH  735  4.222    -8.636   27.012  1.000  35.22
ATOM   2412  OW  HOH  736  -9.949   17.712   62.813  1.000  34.43
ATOM   2413  OW  HOH  737  13.960   -10.203  55.259  1.000  31.79
ATOM   2414  OW  HOH  738  11.831   -1.522   49.308  1.000  25.22
ATOM   2415  OW  HOH  739  2.896    4.247    29.596  1.000  38.64
ATOM   2416  OW  HOH  740  10.959   13.759   25.528  1.000  61.86
ATOM   2417  OW  HOH  741  0.864    17.227   30.557  1.000  50.71
ATOM   2418  OW  HOH  742  31.755   18.949   52.065  1.000  40.48
ATOM   2419  OW  HOH  743  21.678   -0.485   28.218  1.000  43.23
ATOM   2420  OW  HOH  744  10.583   16.397   75.211  1.000  45.04
ATOM   2421  OW  HOH  745  7.480    7.996    78.287  1.000  57.64
ATOM   2422  OW  HOH  746  24.067   35.122   40.297  1.000  41.95
ATOM   2423  OW  HOH  747  7.804    10.269   78.332  1.000  49.63
ATOM   2424  OW  HOH  748  22.131   40.645   45.806  1.000  49.69
ATOM   2425  OW  HOH  749  14.850   -4.647   33.872  1.000  42.88
ATOM   2426  OW  HOH  750  -12.930  32.504   55.211  1.000  37.15
ATOM   2427  OW  HOH  751  -4.832   35.986   43.333  1.000  44.39
ATOM   2428  OW  HOH  752  19.834   33.566   56.449  1.000  31.56
ATOM   2429  OW  HOH  753  3.363    22.310   29.844  1.000  42.02
ATOM   2430  OW  HOH  754  25.594   4.030    34.174  1.000  51.90
ATOM   2431  OW  HOH  755  28.036   35.859   46.448  1.000  39.50
ATOM   2432  OW  HOH  756  -12.951  16.294   61.787  1.000  40.94
ATOM   2433  OW  HOH  757  -10.870  26.452   38.737  1.000  44.85
ATOM   2434  OW  HOH  758  13.216   12.896   70.729  1.000  63.42
ATOM   2435  OW  HOH  759  -0.403   21.161   74.990  1.000  38.96
ATOM   2436  OW  HOH  760  -7.025   32.526   64.316  1.000  39.64
ATOM   2437  OW  HOH  761  -15.459  19.739   58.090  1.000  40.84
ATOM   2438  OW  HOH  762  -4.964   36.577   59.068  1.000  48.64
ATOM   2439  OW  HOH  763  26.807   35.717   50.036  1.000  43.54
ATOM   2440  OW  HOH  764  19.542   7.083    65.538  1.000  41.41
ATOM   2441  OW  HOH  765  3.709    35.837   42.709  1.000  33.78
ATOM   2442  OW  HOH  766  0.431    33.688   40.172  1.000  36.91
ATOM   2443  OW  HOH  767  18.620   5.064    64.617  1.000  45.76
ATOM   2444  OW  HOH  768  35.526   19.792   41.322  1.000  52.54
ATOM   2445  OW  HOH  769  19.671   7.789    67.717  1.000  43.44
ATOM   2446  OW  HOH  770  3.562    12.048   26.149  1.000  40.08
ATOM   2447  OW  HOH  771  20.245   35.637   53.927  1.000  52.16
ATOM   2448  OW  HOH  772  -20.588  25.640   61.573  1.000  58.60
ATOM   2449  OW  HOH  773  1.556    37.342   52.171  1.000  36.23
ATOM   2450  OW  HOH  774  8.340    0.668    49.382  1.000107.24
ATOM   2451  OW  HOH  775  27.160   2.372    34.466  1.000  59.84
ATOM   2452  OW  HOH  776  6.575    19.271   25.545  1.000  36.68
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ATOM	2453	OW	HOH	777	-17.605	29.205	62.661	1.000	56.83
ATOM	2454	OW	HOH	778	7.616	6.902	24.722	1.000	61.34
ATOM	2455	OW	HOH	779	19.749	10.700	68.006	1.000	65.22
ATOM	2456	W	HOH	780	7.281	-5.270	50.090	1.000	50.00
ATOM	2457	W	HOH	781	-6.809	28.483	40.515	1.000	50.00
ATOM	2458	W	HOH	782	9.990	17.263	38.636	1.000	50.00
ATOM	2459	W	HOH	783	5.767	-2.331	28.939	1.000	50.00
ATOM	2460	W	HOH	784	11.694	-0.118	24.984	1.000	50.00
ATOM	2461	W	HOH	785	24.442	7.952	47.994	1.000	50.00
ATOM	2462	W	HOH	786	14.251	36.889	46.491	1.000	50.00
ATOM	2463	W	HOH	787	5.759	26.477	33.851	1.000	50.00
ATOM	2464	W	HOH	788	-11.816	22.606	40.795	1.000	50.00
ATOM	2465	W	HOH	789	-2.531	5.579	45.829	1.000	50.00
ATOM	2466	W	HOH	790	-13.002	32.034	46.612	1.000	50.00
ATOM	2467	W	HOH	791	2.230	3.555	48.985	1.000	50.00
ATOM	2468	W	HOH	792	9.397	13.464	28.121	1.000	50.00
ATOM	2469	W	HOH	793	28.257	10.442	42.781	1.000	50.00
ATOM	2470	W	HOH	794	4.652	17.944	59.241	1.000	50.00
ATOM	2471	W	HOH	795	5.977	15.287	79.554	1.000	50.00
ATOM	2472	W	HOH	796	30.501	11.852	47.616	1.000	50.00
ATOM	2473	W	HOH	797	5.625	14.258	54.367	1.000	50.00
ATOM	2474	W	HOH	798	23.942	20.228	33.277	1.000	50.00
ATOM	2475	W	HOH	799	10.164	14.642	58.997	1.000	50.00
ATOM	2476	W	HOH	800	7.807	31.943	52.999	1.000	50.00
ATOM	2477	W	HOH	801	23.377	9.361	34.817	1.000	50.00
ATOM	2478	W	HOH	802	21.193	9.722	32.004	1.000	50.00
ATOM	2479	W	HOH	803	34.928	14.644	46.038	1.000	50.00
ATOM	2480	W	HOH	804	29.073	16.684	34.445	1.000	50.00
ATOM	2481	W	HOH	805	7.008	-2.049	51.872	1.000	50.00
ATOM	2482	W	HOH	806	25.363	7.860	45.531	1.000	50.00
ATOM	2483	W	HOH	807	30.704	8.207	55.971	1.000	50.00
ATOM	2484	W	HOH	808	33.072	24.900	40.599	1.000	50.00
ATOM	2485	W	HOH	809	-15.577	19.225	63.152	1.000	50.00
ATOM	2486	W	HOH	810	6.072	18.137	23.603	1.000	50.00
ATOM	2487	W	HOH	811	-7.214	39.940	55.639	1.000	50.00
ATOM	2488	W	HOH	812	5.509	18.517	74.919	1.000	50.00
ATOM	2489	W	HOH	813	33.845	9.908	56.672	1.000	50.00
ATOM	2490	W	HOH	814	0.421	35.779	42.931	1.000	50.00
ATOM	2491	W	HOH	815	35.282	21.705	48.656	1.000	50.00
ATOM	2492	W	HOH	816	39.344	22.173	46.871	1.000	50.00
ATOM	2493	W	HOH	817	-5.192	39.820	60.056	1.000	50.00
ATOM	2494	W	HOH	818	30.199	13.039	33.383	1.000	50.00
ATOM	2495	W	HOH	819	-4.860	36.454	61.731	1.000	50.00
ATOM	2496	W	HOH	820	-14.599	17.407	58.382	1.000	50.00
ATOM	2497	W	HOH	821	1.340	-0.111	41.711	0.500	50.00
ATOM	2498	W	HOH	822	34.512	23.218	52.108	1.000	50.00
ATOM	2499	W	HOH	823	32.136	12.571	52.190	1.000	50.00
ATOM	2500	W	HOH	824	13.525	-6.549	29.838	1.000	50.00
ATOM	2501	W	HOH	825	6.072	-4.141	27.534	1.000	50.00

STRUCTURE B

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ATOM      1    CB   MET  1    31.030   11.882   57.066   1.000 50.96
ANISOU    1    CB   MET  1    5663     3892     9809     1113  -2217  -554
ATOM      2    CG   MET  1    30.206   12.690   56.086   1.000 51.63
ANISOU    2    CG   MET  1    6595     3775     9246     691   -1891  169
ATOM      3    SD   MET  1    28.694   11.848   55.559   1.000 40.50
ANISOU    3    SD   MET  1    7003     3962     4424     833   -1535  -460
ATOM      4    CE   MET  1    27.852   11.584   57.120   1.000 45.32
ANISOU    4    CE   MET  1    8632     3912     4677     -239  -653   -1702
ATOM      5    C    MET  1    31.587   13.367   58.999   1.000 52.14
ANISOU    5    C    MET  1    6204     4752     8854     287   -2128  -63
ATOM      6    O    MET  1    31.239   12.847   60.058   1.000 52.92
ANISOU    6    O    MET  1    7381     5242     7483     1417  -4224  519
ATOM      7    N    MET  1    33.170   11.646   58.275   1.000 57.78
ANISOU    7    N    MET  1    4533     6034     11388    34    -1912  -811
ATOM      8    CA   MET  1    32.156   12.587   57.819   1.000 54.62
ANISOU    8    CA   MET  1    6441     4752     9560     137   -2012  -617
ATOM      9    N    ASP  2    31.485   14.679   58.792   1.000 43.52
ANISOU    9    N    ASP  2    3460     4866     8210     474   -2350  47
ATOM     10    CA   ASP  2    30.759   15.471   59.796   1.000 41.69
ANISOU   10    CA   ASP  2    4439     4678     6722     -309  -2603  -31
ATOM     11    CB   ASP  2    31.206   16.912   59.644   1.000 37.89
ANISOU   11    CB   ASP  2    3805     4768     5822     -304  -3473  266
ATOM     12    CG   ASP  2    30.219   17.958   60.121   1.000 39.59
ANISOU   12    CG   ASP  2    4511     4616     5916     15    -3218  589
ATOM     13    OD1  ASP  2    29.325   17.637   60.933   1.000 45.10
ANISOU   13    OD1  ASP  2    5866     4689     6581     -553  -1950  -625
ATOM     14    OD2  ASP  2    30.363   19.121   59.663   1.000 42.05
ANISOU   14    OD2  ASP  2    5994     4341     5643     -465  -3788  145
ATOM     15    C    ASP  2    29.275   15.213   59.556   1.000 33.84
ANISOU   15    C    ASP  2    4131     3634     5094     -59   -1682  -122
ATOM     16    O    ASP  2    28.901   15.176   58.379   1.000 29.25
ANISOU   16    O    ASP  2    2232     4393     4489     658   -390   -615
ATOM     17    N    THR  3    28.467   15.029   60.597   1.000 29.41
ANISOU   17    N    THR  3    4731     2636     3807     907   -2076  -284
ATOM     18    CA   THR  3    27.046   14.764   60.421   1.000 28.55
ANISOU   18    CA   THR  3    4602     2494     3753     597   -1006  -390
ATOM     19    CB   THR  3    26.447   13.762   61.414   1.000 36.51
ANISOU   19    CB   THR  3    7170     2209     4495     -791  -1996  52
ATOM     20    OG1  THR  3    26.629   14.220   62.758   1.000 42.45
ANISOU   20    OG1  THR  3    9519     2620     3989     -920  -1251  383
ATOM     21    CG2  THR  3    27.153   12.412   61.315   1.000 50.26
ANISOU   21    CG2  THR  3    9604     1863     7630     -602  -733   -333
ATOM     22    C    THR  3    26.240   16.061   60.553   1.000 29.01
ANISOU   22    C    THR  3    4535     2548     3939     738   -1079  99
ATOM     23    O    THR  3    25.041   16.044   60.827   1.000 35.82
ANISOU   23    O    THR  3    5149     2485     5976     390   524    -1246
ATOM     24    N    THR  4    26.928   17.181   60.332   1.000 24.98
ANISOU   24    N    THR  4    3874     2456     3162     542   -2040  -986
ATOM     25    CA   THR  4    26.214   18.465   60.327   1.000 23.97
ANISOU   25    CA   THR  4    3437     2426     3244     344   -1563  -375
ATOM     26    CB   THR  4    27.183   19.650   60.408   1.000 26.77
ANISOU   26    CB   THR  4    2636     2429     5105     651   -988   -923
ATOM     27    OG1  THR  4    28.050   19.484   61.551   1.000 32.62
ANISOU   27    OG1  THR  4    3398     2812     6184     195   -2081  -1134
ATOM     28    CG2  THR  4    26.429   20.942   60.663   1.000 26.40
ANISOU   28    CG2  THR  4    2373     2692     4967     533   -573   -1570
ATOM     29    C    THR  4    25.325   18.577   59.097   1.000 21.64
ANISOU   29    C    THR  4    3090     2760     2374     368   -750   -20
ATOM     30    O    THR  4    25.738   18.264   57.980   1.000 21.58
ANISOU   30    O    THR  4    2668     2629     2902     246   -560   -659
ATOM     31    N    VAL  5    24.104   19.049   59.340   1.000 15.88
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ANISOU  31   N    VAL   5    2505   2021   1508   -613   -630 - 1 6 2
ATOM    32   CA   VAL   5   23.211 19.385 58.211 1.000 14.80
ANISOU  32   CA   VAL   5    2463   1893   1266   -594   -473 - 8 7
ATOM    33   CB   VAL   5   21.742 19.402 58.606 1.000 16.09
ANISOU  33   CB   VAL   5    2476   1881   1757   -412   -406 5 0 2
ATOM    34   CG1  VAL   5   20.855 19.846 57.447 1.000 14.91
ANISOU  34   CG1  VAL   5    2468   1859   1337      9   -102   1 9 7
ATOM    35   CG2  VAL   5   21.310 17.994 59.074 1.000 21.15
ANISOU  35   CG2  VAL   5    3015   2345   2677   -700   -418 1 1 9 8
ATOM    36   C    VAL   5   23.639 20.762 57.694 1.000 17.70
ANISOU  36   C    VAL   5    2893   2085   1749  -1137   -713 1 0 3
ATOM    37   O    VAL   5   23.532 21.759 58.419 1.000 17.35
ANISOU  37   O    VAL   5    2566   1978   2050   -698   -650 1 0 5
ATOM    38   N    PRO   6   24.150 20.845 56.479 1.000 13.23
ANISOU  38   N    PRO   6    1334   1597   2097   -162   -668 4 0 9
ATOM    39   CD   PRO   6   24.302 19.770 55.484 1.000 15.56
ANISOU  39   CD   PRO   6    1887   1850   2176   -309   -383 2 7 7
ATOM    40   CA   PRO   6   24.667 22.137 56.005 1.000 14.49
ANISOU  40   CA   PRO   6    1332   1740   2432   -218   -536 5 2 2
ATOM    41   CB   PRO   6   25.571 21.722 54.847 1.000 18.21
ANISOU  41   CB   PRO   6    2294   1740   2886   -224    130   4 3 4
ATOM    42   CG   PRO   6   25.132 20.378 54.409 1.000 20.37
ANISOU  42   CG   PRO   6    2708   2632   2399  -1078     38 - 6 1
ATOM    43   C    PRO   6   23.576 23.091 55.510 1.000 14.59
ANISOU  43   C    PRO   6    1388   1712   2443   -406   -786 6 9 8
ATOM    44   O    PRO   6   22.408 22.743 55.295 1.000 13.06
ANISOU  44   O    PRO   6    1298   1547   2118   -283   -596 1 5
ATOM    45   N    THR   7   24.048 24.326 55.313 1.000 14.56
ANISOU  45   N    THR   7    1393   1678   2463   -380   -565 5 8 7
ATOM    46   CA   THR   7   23.288 25.428 54.771 1.000 13.28
ANISOU  46   CA   THR   7    1463   1584   1998   -469   -734 4 4 0
ATOM    47   CB   THR   7   23.121 26.572 55.799 1.000 14.44
ANISOU  47   CB   THR   7    1927   1652   1905   -348  -1257 3 2 9
ATOM    48   OG1  THR   7   22.454 26.102 56.998 1.000 18.44
ANISOU  48   OG1  THR   7    3136   2013   1858   -333   -829 1 7 6
ATOM    49   CG2  THR   7   22.290 27.719 55.261 1.000 14.98
ANISOU  49   CG2  THR   7    1390   1788   2513   -213   -727 4 1 2
ATOM    50   C    THR   7   23.973 26.005 53.539 1.000 14.62
ANISOU  50   C    THR   7    1144   2200   2212   -355   -693 7 0 4
ATOM    51   O    THR   7   25.192 26.257 53.600 1.000 17.21
ANISOU  51   O    THR   7    1284   2515   2738   -641   -840 9 7 5
ATOM    52   N    PHE   8   23.211 26.222 52.472 1.000 12.32
ANISOU  52   N    PHE   8    1165   1596   1919   -314   -534 3 7 0
ATOM    53   CA   PHE   8   23.692 26.869 51.283 1.000 13.31
ANISOU  53   CA   PHE   8    1554   1531   1971    -60   -295 3 4 3
ATOM    54   CB   PHE   8   23.724 25.933 50.067 1.000 13.71
ANISOU  54   CB   PHE   8    1479   1705   2025   -136   -232 2 3 4
ATOM    55   CG   PHE   8   24.635 24.746 50.258 1.000 13.68
ANISOU  55   CG   PHE   8    1225   1716   2257   -185      8   1 5 5
ATOM    56   CD1  PHE   8   24.147 23.503 50.628 1.000 14.10
ANISOU  56   CD1  PHE   8    1317   1710   2329    -93    231   2 2 1
ATOM    57   CD2  PHE   8   26.006 24.882 50.079 1.000 17.52
ANISOU  57   CD2  PHE   8    1239   2282   3134   -234    -56   9 1 7
ATOM    58   CE1  PHE   8   24.984 22.420 50.812 1.000 15.39
ANISOU  58   CE1  PHE   8    1473   1878   2497    -11    242   4 8 1
ATOM    59   CE2  PHE   8   26.840 23.807 50.271 1.000 17.73
ANISOU  59   CE2  PHE   8    1179   2259   3301   -157   -143 4 2 3
ATOM    60   CZ   PHE   8   26.348 22.567 50.654 1.000 17.12
ANISOU  60   CZ   PHE   8    1310   2437   2757     24   -382   9 7 8
ATOM    61   C    PHE   8   22.821 28.073 50.909 1.000 12.76
ANISOU  61   C    PHE   8    1401   1513   1935   -164   -145 4 4 2
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ATOM     62   O    PHE   8    21.602   28.033   51.079   1.000 13.18
ANISOU   62   O    PHE   8    1392     1295     2322      -256  -400 3 6 4
ATOM     63   N    SER   9    23.478   29.096   50.394   1.000 13.03
ANISOU   63   N    SER   9    1722     1636     1593      -565  -601 4 9 0
ATOM     64   CA   SER   9    22.861   30.224   49.718   1.000 12.55
ANISOU   64   CA   SER   9    1591     1468     1708      -392  -438 3 1 5
ATOM     65   CB   SER   9    23.743   31.472   49.761   1.000 15.41
ANISOU   65   CB   SER   9    2385     1833     1637      -915  -1057 7 8 3
ATOM     66   OG   SER   9    23.138   32.539   49.007   1.000 17.99
ANISOU   66   OG   SER   9    2504     1721     2611      -718  -999 9 2 4
ATOM     67   C    SER   9    22.520   29.868   48.276   1.000 12.72
ANISOU   67   C    SER   9    2040     1187     1606      -411  -576 4 7 6
ATOM     68   O    SER   9    23.397   29.495   47.478   1.000 16.18
ANISOU   68   O    SER   9    2265     2053     1830      -465  -381 7 3
ATOM     69   N    LEU   10   21.229   29.982   47.968   1.000 14.19
ANISOU   69   N    LEU   10   2154     1488     1750      -301  -699 1 7 4
ATOM     70   CA   LEU   10   20.798   29.714   46.596   1.000 14.62
ANISOU   70   CA   LEU   10   2243     1579     1734      -184  -784 2 2 4
ATOM     71   CB   LEU   10   19.291   29.883   46.436   1.000 14.72
ANISOU   71   CB   LEU   10   2222     1714     1657      -142  -657 - 168
ATOM     72   CG   LEU   10   18.693   29.633   45.050   1.000 14.10
ANISOU   72   CG   LEU   10   2087     1557     1713      -702  -695 1 4 5
ATOM     73   CD1  LEU   10   18.986   28.214   44.582   1.000 16.23
ANISOU   73   CD1  LEU   10   2994     1578     1595      -554  -1132 8 7
ATOM     74   CD2  LEU   10   17.198   29.913   44.997   1.000 21.82
ANISOU   74   CD2  LEU   10   2180     2904     3206      -421  -1151 - 5 1 8
ATOM     75   C    LEU   10   21.531   30.639   45.626   1.000 15.87
ANISOU   75   C    LEU   10   2449     1785     1796      -491  -844 3 1 4
ATOM     76   O    LEU   10   21.962   30.199   44.553   1.000 16.33
ANISOU   76   O    LEU   10   2607     1816     1780      -601  -829 2 7 6
ATOM     77   N    ALA   11   21.669   31.917   45.986   1.000 17.17
ANISOU   77   N    ALA   11   2521     1889     2115      -607  -548 1 3 9
ATOM     78   CA   ALA   11   22.335   32.912   45.129   1.000 16.56
ANISOU   78   CA   ALA   11   2377     1884     2029      -732  -1033 3 0 2
ATOM     79   CB   ALA   11   22.199   34.259   45.805   1.000 20.05
ANISOU   79   CB   ALA   11   3210     1877     2529      -670  -674 2 5 9
ATOM     80   C    ALA   11   23.786   32.535   44.831   1.000 16.33
ANISOU   80   C    ALA   11   2319     2255     1629      -754  -988 4 3 4
ATOM     81   O    ALA   11   24.260   32.587   43.677   1.000 19.66
ANISOU   81   O    ALA   11   3115     2559     1795      -947  -560 6 1 9
ATOM     82   N    GLU   12   24.558   32.085   45.810   1.000 17.28
ANISOU   82   N    GLU   12   2686     1994     1884      -454  -1087 3 9 0
ATOM     83   CA   GLU   12   25.931   31.654   45.752   1.000 16.34
ANISOU   83   CA   GLU   12   2703     1674     1831      -474  -889 1 0 3 3
ATOM     84   CB   GLU   12   26.527   31.477   47.158   1.000 16.09
ANISOU   84   CB   GLU   12   2440     1867     1808      -770  -820 1 0 5 8
ATOM     85   CG   GLU   12   26.633   32.802   47.915   1.000 18.90
ANISOU   85   CG   GLU   12   2717     2127     2335      -1216 -1090 7 8 8
ATOM     86   CD   GLU   12   27.115   32.657   49.342   1.000 21.17
ANISOU   86   CD   GLU   12   3300     2547     2198      -1182 -1053 7 2 4
ATOM     87   OE1  GLU   12   27.538   31.558   49.756   1.000 22.07
ANISOU   87   OE1  GLU   12   2722     3014     2650      -720  -1365 7 9 7
ATOM     88   OE2  GLU   12   27.068   33.679   50.059   1.000 29.26
ANISOU   88   OE2  GLU   12   5764     2634     2722      -1279 -1848 4 7 6
ATOM     89   C    GLU   12   25.997   30.402   44.882   1.000 17.16
ANISOU   89   C    GLU   12   2044     2319     2158      -624  -715 4 8 1
ATOM     90   O    GLU   12   26.879   30.317   44.032   1.000 18.88
ANISOU   90   O    GLU   12   3200     2388     1583      -1004 -306 8 9 9
ATOM     91   N    LEU   13   25.083   29.441   45.049   1.000 17.32
ANISOU   91   N    LEU   13   2176     2300     2104      -659  -386 9 4
ATOM     92   CA   LEU   13   25.082   28.252   44.189   1.000 14.00
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ANISOU  92   CA   LEU  13   1734    1873    1713   -140  -170  49 8
ATOM    93   CB   LEU  13   24.003  27.248  44.620 1.000 15.37
ANISOU  93   CB   LEU  13   2205    1838    1795   -375  -149  46 5
ATOM    94   CG   LEU  13   24.154  26.554  45.967 1.000 14.52
ANISOU  94   CG   LEU  13   1913    1803    1799   -280  -204  44 2
ATOM    95   CD1  LEU  13   22.934  25.680  46.193 1.000 15.15
ANISOU  95   CD1  LEU  13   2174    1817    1766   -433   185  17 5
ATOM    96   CD2  LEU  13   25.411  25.690  46.067 1.000 17.54
ANISOU  96   CD2  LEU  13   2119    2043    2502    -38  -419 27 0
ATOM    97   C    LEU  13   24.876  28.626  42.725 1.000 16.54
ANISOU  97   C    LEU  13   2510    2062    1710   -222   -93  56 5
ATOM    98   O    LEU  13   25.548  28.122  41.821 1.000 18.28
ANISOU  98   O    LEU  13   2685    2514    1748   -687    75 25 9
ATOM    99   N    GLN  14   23.945  29.534  42.472 1.000 16.86
ANISOU  99   N    GLN  14   1970    2337    2100   -557  -683 83 8
ATOM   100   CA   GLN  14   23.657  30.015  41.132 1.000 18.63
ANISOU 100   CA   GLN  14   2761    2404    1915   -610  -802 56 8
ATOM   101   CB   GLN  14   22.421  30.923  41.130 1.000 19.39
ANISOU 101   CB   GLN  14   3166    2176    2025   -392  -918 97 7
ATOM   102   CG   GLN  14   21.108  30.250  41.460 1.000 19.00
ANISOU 102   CG   GLN  14   2879    2383    1957   -209  -725 46 0
ATOM   103   CD   GLN  14   19.974  31.227  41.766 1.000 18.83
ANISOU 103   CD   GLN  14   3139    2118    1897     -6 -1229 49 4
ATOM   104   OE1  GLN  14   20.177  32.317  42.314 1.000 26.10
ANISOU 104   OE1  GLN  14   3928    2407    3582    -98  -1172 - 241
ATOM   105   NE2  GLN  14   18.745  30.823  41.411 1.000 20.94
ANISOU 105   NE2  GLN  14   2900    2716    2340   -149  -840 45 4
ATOM   106   C    GLN  14   24.804  30.812  40.525 1.000 20.40
ANISOU 106   C    GLN  14   3226    2458    2065   -795  -712 93 7
ATOM   107   O    GLN  14   24.812  30.951  39.311 1.000 30.48
ANISOU 107   O    GLN  14   5089    4340    2152  -2337  -898 12 1 1
ATOM   108   N    GLN  15   25.734  31.309  41.329 1.000 20.35
ANISOU 108   N    GLN  15   3252    2452    2030  -1067  -240 49 7
ATOM   109   CA   GLN  15   26.909  32.041  40.884 1.000 21.88
ANISOU 109   CA   GLN  15   3184    3230    1901  -1152  -299 78 8
ATOM   110   CB   GLN  15   27.288  33.100  41.920 1.000 22.20
ANISOU 110   CB   GLN  15   2720    3162    2551  -1131  -770 69 1
ATOM   111   CG   GLN  15   26.450  34.358  41.954 1.000 25.73
ANISOU 111   CG   GLN  15   4496    2735    2545   -821  -233 12 6 9
ATOM   112   CD   GLN  15   26.325  35.021  43.306 1.000 35.76
ANISOU 112   CD   GLN  15   6010    3945    3631   -643  -229 - 135
ATOM   113   OE1  GLN  15   27.145  34.884  44.225 1.000 49.13
ANISOU 113   OE1  GLN  15   8425    5866    4378  -2857 -2197 - 5 6 4
ATOM   114   NE2  GLN  15   25.255  35.812  43.489 1.000 51.85
ANISOU 114   NE2  GLN  15   7190    5567    6945     62  3066  10 7
ATOM   115   C    GLN  15   28.069  31.079  40.625 1.000 23.93
ANISOU 115   C    GLN  15   3451    3513    2127   -990   145  88 4
ATOM   116   O    GLN  15   29.177  31.448  40.213 1.000 28.95
ANISOU 116   O    GLN  15   3535    4619    2845   -899   510  12 2 5
ATOM   117   N    GLY  16   27.828  29.794  40.891 1.000 25.86
ANISOU 117   N    GLY  16   4089    3282    2457   -889   -36  46 9
ATOM   118   CA   GLY  16   28.812  28.763  40.649 1.000 29.00
ANISOU 118   CA   GLY  16   4785    3562    2671   -677   765  25 5
ATOM   119   C    GLY  16   29.741  28.546  41.814 1.000 25.45
ANISOU 119   C    GLY  16   3427    3490    2754   -264  1422 67 3
ATOM   120   O    GLY  16   30.805  27.955  41.625 1.000 29.63
ANISOU 120   O    GLY  16   3925    3267    4068    -66  1997 52 3
ATOM   121   N    LEU  17   29.387  28.979  43.015 1.000 22.50
ANISOU 121   N    LEU  17   3266    2713    2569    -39   923  73 3
ATOM   122   CA   LEU  17   30.234  28.727  44.172 1.000 21.73
ANISOU 122   CA   LEU  17   2299    2931    3025   -282   867  74 8
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ATOM    123  CB  LEU  17  30.124  29.921  45.132  1.000 21.23
ANISOU  123  CB  LEU  17  2137    2858    3071    -620  669   711
ATOM    124  CG  LEU  17  30.354  31.274  44.431  1.000 26.12
ANISOU  124  CG  LEU  17  2708    2965    4253    -889  1342 931
ATOM    125  CD1 LEU  17  29.962  32.444  45.305  1.000 29.81
ANISOU  125  CD1 LEU  17  2515    2924    5885    -396  464  303
ATOM    126  CD2 LEU  17  31.808  31.350  43.974  1.000 32.84
ANISOU  126  CD2 LEU  17  2845    3703    5930    -281  1871 2114
ATOM    127  C   LEU  17  29.886  27.456  44.936  1.000 19.36
ANISOU  127  C   LEU  17  2081    2819    2455    -239  545  580
ATOM    128  O   LEU  17  28.773  26.920  44.848  1.000 21.11
ANISOU  128  O   LEU  17  2284    3004    2734    -444  107  1055
ATOM    129  N   HIS  18  30.838  26.952  45.706  1.000 21.02
ANISOU  129  N   HIS  18  2124    2752    3109    -314  193  491
ATOM    130  CA  HIS  18  30.678  25.814  46.615  1.000 18.11
ANISOU  130  CA  HIS  18  1569    2996    2315    -460  -28  361
ATOM    131  CB  HIS  18  29.655  26.149  47.702  1.000 21.25
ANISOU  131  CB  HIS  18  1731    3332    3010    -45   282  354
ATOM    132  CG  HIS  18  29.796  27.515  48.283  1.000 23.28
ANISOU  132  CG  HIS  18  2234    3612    2999    211   -46  -20
ATOM    133  CD2 HIS  18  28.898  28.535  48.344  1.000 24.53
ANISOU  133  CD2 HIS  18  3112    3479    2728    532   41   440
ATOM    134  ND1 HIS  18  30.940  27.977  48.895  1.000 26.72
ANISOU  134  ND1 HIS  18  2938    4039    3173    -151  -569 38
ATOM    135  CE1 HIS  18  30.756  29.218  49.307  1.000 29.80
ANISOU  135  CE1 HIS  18  4476    3775    3071    -542  -562 237
ATOM    136  NE2 HIS  18  29.524  29.581  48.985  1.000 30.03
ANISOU  136  NE2 HIS  18  4752    3282    3377    216   -148 338
ATOM    137  C   HIS  18  30.266  24.528  45.917  1.000 18.57
ANISOU  137  C   HIS  18  1943    3084    2028    -951  30   590
ATOM    138  O   HIS  18  29.594  23.682  46.532  1.000 19.92
ANISOU  138  O   HIS  18  1949    3125    2493    -777  -87  995
ATOM    139  N   GLN  19  30.647  24.340  44.658  1.000 19.24
ANISOU  139  N   GLN  19  2329    2700    2282    -256  298  494
ATOM    140  CA  GLN  19  30.119  23.206  43.908  1.000 21.51
ANISOU  140  CA  GLN  19  3249    2431    2492    -228  597  318
ATOM    141  CB  GLN  19  30.446  23.307  42.406  1.000 22.89
ANISOU  141  CB  GLN  19  3231    3058    2408    -148  463  244
ATOM    142  CG  GLN  19  29.738  24.453  41.698  1.000 25.83
ANISOU  142  CG  GLN  19  3445    3712    2658    -384  -407 568
ATOM    143  CD  GLN  19  28.223  24.470  41.747  1.000 31.56
ANISOU  143  CD  GLN  19  3439    4722    3832    -252  -988 357
ATOM    144  OE1 GLN  19  27.521  23.640  41.153  1.000 38.51
ANISOU  144  OE1 GLN  19  3869    3649    7115    377   -3045 686
ATOM    145  NE2 GLN  19  27.621  25.433  42.475  1.000 33.32
ANISOU  145  NE2 GLN  19  3303    5695    3663    647   -1109 449
ATOM    146  C   GLN  19  30.578  21.873  44.485  1.000 20.32
ANISOU  146  C   GLN  19  2224    2710    2785    -60   514  394
ATOM    147  O   GLN  19  29.806  20.900  44.473  1.000 19.08
ANISOU  147  O   GLN  19  1888    2451    2910    221   257  743
ATOM    148  N   ASP  20  31.800  21.761  44.999  1.000 24.09
ANISOU  148  N   ASP  20  3001    3507    2645    -773  -507 415
ATOM    149  CA  ASP  20  32.268  20.498  45.553  1.000 21.82
ANISOU  149  CA  ASP  20  1707    3811    2774    -327  -58  357
ATOM    150  CB  ASP  20  33.780  20.527  45.779  1.000 26.34
ANISOU  150  CB  ASP  20  1594    4552    3863    -962  236  490
ATOM    151  CG  ASP  20  34.596  20.517  44.503  1.000 34.45
ANISOU  151  CG  ASP  20  2531    5859    4701    -1208 1213 -280
ATOM    152  OD1 ASP  20  34.177  19.982  43.457  1.000 33.11
ANISOU  152  OD1 ASP  20  3768    4173    4640    -311  1233 -375
ATOM    153  OD2 ASP  20  35.725  21.056  44.532  1.000 49.71
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ANISOU 153  OD2 ASP 20   3445      9922       5519      -3116 1710 5 3
ATOM   154  C   ASP 20   31.538 20.179 46.862 1.000 21.03
ANISOU 154  C   ASP 20   1876      2702       3412      -231   616  3 8 8
ATOM   155  O   ASP 20   31.118 19.038 47.075 1.000 20.80
ANISOU 155  O   ASP 20   1162      2583       4157      -72   -139 5 5 0
ATOM   156  N   GLU 21   31.359 21.177 47.729 1.000 17.88
ANISOU 156  N   GLU 21   1218      2751       2824      -263  -148 5 1 1
ATOM   157  CA  GLU 21   30.599 20.999 48.965 1.000 16.80
ANISOU 157  CA  GLU 21   1128      2173       3083      -96    46  3 9 4
ATOM   158  CB  GLU 21   30.654 22.304 49.781 1.000 20.23
ANISOU 158  CB  GLU 21   1366      2620       3701       5    -262  - 210
ATOM   159  CG  GLU 21   32.040 22.669 50.307 1.000 24.60
ANISOU 159  CG  GLU 21   1660      3325       4359      -221  -654 - 3 0 1
ATOM   160  CD  GLU 21   32.860 23.565 49.402 1.000 28.46
ANISOU 160  CD  GLU 21   1191      4348       5275      -498  -1597 1 1 2 5
ATOM   161  OE1 GLU 21   33.751 24.294 49.919 1.000 31.17
ANISOU 161  OE1 GLU 21   2360      4428       5057      -1039 -1094 3 4 9
ATOM   162  OE2 GLU 21   32.664 23.590 48.171 1.000 31.16
ANISOU 162  OE2 GLU 21   2734      3901       5203      -1519 -1565 1 1 2 3
ATOM   163  C   GLU 21   29.159 20.594 48.689 1.000 16.44
ANISOU 163  C   GLU 21   1271      2295       2679      -165  -53  4 3 0
ATOM   164  O   GLU 21   28.599 19.700 49.329 1.000 14.30
ANISOU 164  O   GLU 21   1271      2257       1907      -417  -301 3  6
ATOM   165  N   PHE 22   28.548 21.257 47.708 1.000 16.14
ANISOU 165  N   PHE 22   1440      2441       2253      -316  -28  3 2 8
ATOM   166  CA  PHE 22   27.155 20.947 47.327 1.000 15.36
ANISOU 166  CA  PHE 22   1530      2012       2294      -262  -173 2 8 1
ATOM   167  CB  PHE 22   26.612 21.967 46.343 1.000 15.43
ANISOU 167  CB  PHE 22   1863      2056       1944      -316  -247 1 8 4
ATOM   168  CG  PHE 22   25.119 21.932 46.077 1.000 15.59
ANISOU 168  CG  PHE 22   1822      2141       1962      -299  -170 5 6 1
ATOM   169  CD1 PHE 22   24.218 21.987 47.129 1.000 17.03
ANISOU 169  CD1 PHE 22   1923      2605       1943      -410  -162 - 4 0
ATOM   170  CD2 PHE 22   24.606 21.856 44.797 1.000 14.84
ANISOU 170  CD2 PHE 22   1541      2083       2013       51  -94  - 1 5 5
ATOM   171  CE1 PHE 22   22.861 21.938 46.906 1.000 15.96
ANISOU 171  CE1 PHE 22   1844      1805       2414      -159  -64  1 7 6
ATOM   172  CE2 PHE 22   23.243 21.797 44.551 1.000 15.81
ANISOU 172  CE2 PHE 22   1600      1993       2416      -261  -190 - 1 7 6
ATOM   173  CZ  PHE 22   22.360 21.853 45.612 1.000 14.18
ANISOU 173  CZ  PHE 22   1427      1430       2531      -105  -164 3 2 5
ATOM   174  C   PHE 22   27.049 19.515 46.792 1.000 16.23
ANISOU 174  C   PHE 22   1325      2042       2797      -110   164  1 0 2
ATOM   175  O   PHE 22   26.183 18.751 47.229 1.000 13.24
ANISOU 175  O   PHE 22   1411      1743       1876       105  -194 3 9 1
ATOM   176  N   ARG 23   27.888 19.097 45.853 1.000 15.45
ANISOU 176  N   ARG 23   1585      2313       1971      -167  -80  2 8 9
ATOM   177  CA  ARG 23   27.865 17.746 45.325 1.000 15.49
ANISOU 177  CA  ARG 23   809 2443       2634       50  -41   - 2 2
ATOM   178  CB  ARG 23   28.928 17.539 44.248 1.000 17.81
ANISOU 178  CB  ARG 23   966 3142       2658      -128   43  - 1 6 7
ATOM   179  CG  ARG 23   28.470 17.928 42.860 1.000 25.86
ANISOU 179  CG  ARG 23   2719      4636       2470      -758  -176 - 4 9
ATOM   180  CD  ARG 23   29.485 17.370 41.867 1.000 34.68
ANISOU 180  CD  ARG 23   5148      4847       3183      -1532 1634 - 5 4 8
ATOM   181  NE  ARG 23   30.660 18.253 41.877 1.000 31.13
ANISOU 181  NE  ARG 23   2799      4194       4836       305   747  6 6
ATOM   182  CZ  ARG 23   30.703 19.424 41.244 1.000 34.24
ANISOU 182  CZ  ARG 23   2749      4844       5418      -757   239  7 6 4
ATOM   183  NH1 ARG 23   29.647 19.856 40.551 1.000 28.06
ANISOU 183  NH1 ARG 23   2714      3685       4263      -721   555  1 8 1
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ATOM    184  NH2 ARG   23   31.830  20.114  41.340  1.000 36.08
ANISOU  184  NH2 ARG   23   2261    5328    6121    -562   776  - 8 6
ATOM    185  C   ARG   23   28.045  16.713  46.420  1.000 15.06
ANISOU  185  C   ARG   23   1071    2061    2589     167   -32  - 2 3 4
ATOM    186  O   ARG   23   27.335  15.687  46.410  1.000 16.28
ANISOU  186  O   ARG   23   1443    2244    2497    -118   -71  - 2 7 7
ATOM    187  N   ARG   24   28.952  16.988  47.353  1.000 15.27
ANISOU  187  N   ARG   24   1024    2156    2623     -52   -21    2 9
ATOM    188  CA  ARG   24   29.193  16.003  48.430  1.000 17.70
ANISOU  188  CA  ARG   24   1443    2589    2693     275   - 2  2 1 5
ATOM    189  CB  ARG   24   30.466  16.422  49.148  1.000 21.11
ANISOU  189  CB  ARG   24   1244    3486    3289     484   -257 3 8 4
ATOM    190  CG  ARG   24   31.787  16.217  48.429  1.000 30.46
ANISOU  190  CG  ARG   24   1438    5078    5057     426    441   3 0 8
ATOM    191  CD  ARG   24   32.979  16.537  49.330  1.000 33.50
ANISOU  191  CD  ARG   24   1163    5831    5736     208    370  4 5 8
ATOM    192  NE  ARG   24   33.636  17.804  49.071  1.000 51.46
ANISOU  192  NE  ARG   24   5800    7316    6437   -2596  -1688 1165
ATOM    193  CZ  ARG   24   33.973  18.776  49.903  1.000 46.72
ANISOU  193  CZ  ARG   24   4738    6888    6124   -1719  -1822 1316
ATOM    194  NH1 ARG   24   33.731  18.728  51.213  1.000 44.24
ANISOU  194  NH1 ARG   24   2650    6998    7160    -392   1001 8 4
ATOM    195  NH2 ARG   24   34.579  19.871  49.448  1.000 42.82
ANISOU  195  NH2 ARG   24   5339    4428    6503     513   -991 1216
ATOM    196  C   ARG   24   27.972  15.887  49.334  1.000 17.16
ANISOU  196  C   ARG   24   1549    2071    2900     129    140  2 9 5
ATOM    197  O   ARG   24   27.536  14.779  49.713  1.000 15.38
ANISOU  197  O   ARG   24   1706    1890    2247      72   -388  1 0 4
ATOM    198  N   CYS   25   27.355  17.011  49.696  1.000 12.91
ANISOU  198  N   CYS   25    907    1824    2176    -254   -386  1 5 1
ATOM    199  CA  CYS   25   26.105  17.040  50.454  1.000 12.45
ANISOU  199  CA  CYS   25    942    1838    1949    -178   -480  8 1
ATOM    200  CB  CYS   25   25.660  18.491  50.697  1.000 11.67
ANISOU  200  CB  CYS   25   1150    1759    1527    -136   -604 1 8 4
ATOM    201  SG  CYS   25   23.973  18.580  51.425  1.000 14.90
ANISOU  201  SG  CYS   25   1465    1593    2602    -164   -26  - 1 8
ATOM    202  C   CYS   25   25.001  16.225  49.769  1.000 11.67
ANISOU  202  C   CYS   25    893    1897    1645    -283   -64  - 8 6
ATOM    203  O   CYS   25   24.360  15.377  50.390  1.000 12.73
ANISOU  203  O   CYS   25   1347    1426    2064    -233   -196 1 2 3
ATOM    204  N   LEU   26   24.798  16.461  48.470  1.000 11.70
ANISOU  204  N   LEU   26   1102    1530    1814    -128   -390 1
ATOM    205  CA  LEU   26   23.766  15.716  47.735  1.000 11.11
ANISOU  205  CA  LEU   26   1190    1476    1556    -238   -79  - 1 9 4
ATOM    206  CB  LEU   26   23.674  16.198  46.285  1.000 11.54
ANISOU  206  CB  LEU   26   1345    1522    1518     -75   -84  - 2 0 2
ATOM    207  CG  LEU   26   23.242  17.638  46.019  1.000 12.42
ANISOU  207  CG  LEU   26   1199    1542    1978    -153   -167 - 4 0
ATOM    208  CD1 LEU   26   23.414  17.993  44.539  1.000 14.77
ANISOU  208  CD1 LEU   26   1428    1916    2270      43   131  4 0 1
ATOM    209  CD2 LEU   26   21.814  17.885  46.466  1.000 14.45
ANISOU  209  CD2 LEU   26   1384    2061    2047     264   -32  3 2 1
ATOM    210  C   LEU   26   23.979  14.209  47.780  1.000 12.93
ANISOU  210  C   LEU   26   1360    1542    2011    -121   -486 - 1 0 7
ATOM    211  O   LEU   26   23.011  13.461  48.008  1.000 13.78
ANISOU  211  O   LEU   26   1660    1450    2125    -305   -426 - 5 1
ATOM    212  N   ARG   27   25.196  13.721  47.576  1.000 14.09
ANISOU  212  N   ARG   27   1518    1729    2108     151   -530 - 1 0 5
ATOM    213  CA  ARG   27   25.491  12.283  47.574  1.000 15.39
ANISOU  213  CA  ARG   27   2260    1690    1897     186   141  - 3 5 4
ATOM    214  CB  ARG   27   26.846  12.122  46.900  1.000 17.04
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ANISOU 214  CB  ARG  27   2259   2356   1861    517    49 - 2 4 8
ATOM   215  CG  ARG  27  27.502 10.780 46.801 1.000 25.08
ANISOU 215  CG  ARG  27   3110   2837   3583   1105   606  - 3 9 9
ATOM   216  CD  ARG  27  28.995 10.992 46.457 1.000 30.32
ANISOU 216  CD  ARG  27   2976   3836   4710   1190   720  -1381
ATOM   217  NE  ARG  27  29.818 11.407 47.581 1.000 36.51
ANISOU 217  NE  ARG  27   3633   4937   5301    121   391  -1429
ATOM   218  CZ  ARG  27  30.988 12.019 47.560 1.000 38.07
ANISOU 218  CZ  ARG  27   3334   5192   5941    364   661  -1776
ATOM   219  NH1 ARG  27  31.565 12.340 46.401 1.000 48.56
ANISOU 219  NH1 ARG  27   4482   7688   6280  -1305   736  -1326
ATOM   220  NH2 ARG  27  31.606 12.328 48.701 1.000 40.23
ANISOU 220  NH2 ARG  27   2891   6127   6266    457   717  -2463
ATOM   221  C   ARG  27  25.479 11.630 48.949 1.000 14.66
ANISOU 221  C   ARG  27   1720   1617   2233    135   -33  - 4 2
ATOM   222  O   ARG  27  24.968 10.499 49.072 1.000 17.44
ANISOU 222  O   ARG  27   1981   1533   3114     98  -394   15 5
ATOM   223  N   ASP  28  26.031 12.308 49.973 1.000 13.72
ANISOU 223  N   ASP  28   1703   1366   2146    317  -327 3 1 9
ATOM   224  CA  ASP  28  26.227 11.701 51.277 1.000 15.33
ANISOU 224  CA  ASP  28   1886   1704   2234    538  -247 3 9 1
ATOM   225  CB  ASP  28  27.541 12.280 51.842 1.000 18.31
ANISOU 225  CB  ASP  28   2092   2709   2155    186  -465 5 4 4
ATOM   226  CG  ASP  28  28.785 11.875 51.083 1.000 23.06
ANISOU 226  CG  ASP  28   2002   3583   3176    -96   -50   4 7 8
ATOM   227  OD1 ASP  28  28.741 10.904 50.290 1.000 25.09
ANISOU 227  OD1 ASP  28   2515   2855   4163    830   406   4 4 0
ATOM   228  OD2 ASP  28  29.831 12.528 51.283 1.000 30.05
ANISOU 228  OD2 ASP  28   1919   4262   5236   -216  -695 1 0 5 8
ATOM   229  C   ASP  28  25.092 11.910 52.267 1.000 14.90
ANISOU 229  C   ASP  28   2071   1435   2154    411  -203 2 1 7
ATOM   230  O   ASP  28  24.967 11.093 53.200 1.000 14.50
ANISOU 230  O   ASP  28   1878   1501   2132    444  -265 1 7 9
ATOM   231  N   LYS  29  24.317 12.975 52.096 1.000 12.90
ANISOU 231  N   LYS  29   1487   1290   2126     77  -276   1 3 6
ATOM   232  CA  LYS  29  23.265 13.368 53.029 1.000 12.95
ANISOU 232  CA  LYS  29   1369   1649   1904      8  -390   1 4
ATOM   233  CB  LYS  29  23.699 14.653 53.763 1.000 12.71
ANISOU 233  CB  LYS  29   1105   1581   2145    209  -359 - 3 0
ATOM   234  CG  LYS  29  25.016 14.504 54.518 1.000 16.11
ANISOU 234  CG  LYS  29   1413   1998   2711    21  -818  - 1 6 1
ATOM   235  CD  LYS  29  25.449 15.727 55.309 1.000 18.24
ANISOU 235  CD  LYS  29   2500   1989   2442    -47  -1140 - 1 4
ATOM   236  CE  LYS  29  26.789 15.445 56.002 1.000 19.36
ANISOU 236  CE  LYS  29   2038   3171   2148    -90  -822 - 7 2 5
ATOM   237  NZ  LYS  29  27.515 16.696 56.351 1.000 26.61
ANISOU 237  NZ  LYS  29   2592   3146   4373   -309  -1571 - 3 5 3
ATOM   238  C   LYS  29  21.888 13.550 52.386 1.000 11.62
ANISOU 238  C   LYS  29   1432   1153   1831     52  -290   2 4
ATOM   239  O   LYS  29  20.877 13.028 52.880 1.000 12.57
ANISOU 239  O   LYS  29   1426   1556   1792    -97  -282 1 0 0
ATOM   240  N   GLY  30  21.779 14.280 51.284 1.000 11.98
ANISOU 240  N   GLY  30   1359   1454   1741     -5  -310   7 8
ATOM   241  CA  GLY  30  20.510 14.478 50.562 1.000 10.93
ANISOU 241  CA  GLY  30   1192   1497   1465   -158  -116 - 1 8
ATOM   242  C   GLY  30  19.544 15.433 51.242 1.000 11.15
ANISOU 242  C   GLY  30   1137   1143   1955   -260  -154 - 1 3 1
ATOM   243  O   GLY  30  18.337 15.374 50.963 1.000 11.26
ANISOU 243  O   GLY  30   1247   1082   1949    -56  -419 1 0 4
ATOM   244  N   LEU  31  20.064 16.278 52.129 1.000 10.54
ANISOU 244  N   LEU  31   1292    894   1821    -98  -367   8 9
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ATOM    245  CA  LEU  31  19.272  17.324  52.803  1.000 11.07
ANISOU  245  CA  LEU  31  1345    1111    1752    46 -520  - 3 3
ATOM    246  CB  LEU  31  18.465  16.777  53.975  1.000 14.44
ANISOU  246  CB  LEU  31  1753    1671    2062   -284  -80  - 1 7 8
ATOM    247  CG  LEU  31  19.113  16.629  55.333  1.000 17.74
ANISOU  247  CG  LEU  31  2456    2220    2064   -172 -115 4 9 9
ATOM    248  CD1 LEU  31  18.220  15.978  56.371  1.000 26.19
ANISOU  248  CD1 LEU  31  2716    4691    2543  -1224 -213 1 0 1 6
ATOM    249  CD2 LEU  31  20.388  15.821  55.182  1.000 22.77
ANISOU  249  CD2 LEU  31  3121    2633    2899    650  -18 1 4 8 7
ATOM    250  C   LEU  31  20.176  18.498  53.195  1.000 10.95
ANISOU  250  C   LEU  31  1041    1129    1989    180 -318 - 2 2 3
ATOM    251  O   LEU  31  21.376  18.314  53.424  1.000 10.89
ANISOU  251  O   LEU  31  1015    1171    1952    69 -160  2 0 4
ATOM    252  N   PHE  32  19.570  19.688  53.219  1.000 11.42
ANISOU  252  N   PHE  32  1134    995    2211    75  -273  6 5
ATOM    253  CA  PHE  32  20.280  20.916  53.545  1.000 10.33
ANISOU  253  CA  PHE  32  1071    1152    1703   -57  -288 - 3 3
ATOM    254  CB  PHE  32  21.244  21.307  52.422  1.000 12.25
ANISOU  254  CB  PHE  32  1054    1729    1872   -113 -173 - 5
ATOM    255  CG  PHE  32  20.624  21.346  51.041  1.000 11.94
ANISOU  255  CG  PHE  32  1158    1572    1809   -281 -148 1 2 2
ATOM    256  CD1 PHE  32  20.522  20.188  50.270  1.000 11.12
ANISOU  256  CD1 PHE  32  1070    1308    1846   -182 -458 3 1 8
ATOM    257  CD2 PHE  32  20.145  22.528  50.513  1.000 12.14
ANISOU  257  CD2 PHE  32  1618    1353    1639   -300 -185 - 4 7
ATOM    258  CE1 PHE  32  19.943  20.212  49.015  1.000 12.00
ANISOU  258  CE1 PHE  32  1342    1377    1840   -301 -468 3 3 2
ATOM    259  CE2 PHE  32  19.553  22.534  49.266  1.000 12.79
ANISOU  259  CE2 PHE  32  1858    1543    1457   -86   -34  2 8
ATOM    260  CZ  PHE  32  19.416  21.376  48.503  1.000 11.50
ANISOU  260  CZ  PHE  32  1623    1414    1331   -76  -272 2 1 7
ATOM    261  C   PHE  32  19.310  22.071  53.762  1.000 9.82
ANISOU  261  C   PHE  32  1015    1042    1674   -120 -367 - 7 7
ATOM    262  O   PHE  32  18.165  21.990  53.285  1.000 11.29
ANISOU  262  O   PHE  32  1097    1286    1906   -95  -495 - 7 7
ATOM    263  N   TYR  33  19.736  23.099  54.493  1.000 12.68
ANISOU  263  N   TYR  33  1606    1053    2158   -57  -766 -1 5 9
ATOM    264  CA  TYR  33  18.945  24.335  54.607  1.000 10.64
ANISOU  264  CA  TYR  33  1491    1173    1380   -77   -97  - 1 3 2
ATOM    265  CB  TYR  33  19.141  25.022  55.955  1.000 10.85
ANISOU  265  CB  TYR  33  1019    1725    1379   -260 -224 -1 6 4
ATOM    266  CG  TYR  33  18.545  24.331  57.156  1.000 10.71
ANISOU  266  CG  TYR  33  1173    1552    1342   -45  -230 -1 1 7
ATOM    267  CD1 TYR  33  17.266  24.643  57.619  1.000 11.64
ANISOU  267  CD1 TYR  33  1385    1441    1596   -68   83  - 9 4
ATOM    268  CE1 TYR  33  16.694  24.023  58.719  1.000 13.60
ANISOU  268  CE1 TYR  33  1879    1483    1804   -147  339  - 2 6
ATOM    269  CD2 TYR  33  19.273  23.364  57.853  1.000 14.04
ANISOU  269  CD2 TYR  33  1604    2040    1689    132 -509 1 2 7
ATOM    270  CE2 TYR  33  18.711  22.752  58.964  1.000 15.75
ANISOU  270  CE2 TYR  33  1872    2227    1886   -187 -701 4 3 3
ATOM    271  CZ  TYR  33  17.438  23.078  59.387  1.000 16.02
ANISOU  271  CZ  TYR  33  2205    1939    1942   -332 -154 3 0 0
ATOM    272  OH  TYR  33  16.919  22.454  60.504  1.000 19.95
ANISOU  272  OH  TYR  33  3412    2154    2015   -60   278  4 0 0
ATOM    273  C   TYR  33  19.357  25.253  53.452  1.000 10.92
ANISOU  273  C   TYR  33  1249    1448    1453   -125 -271 1 4 9
ATOM    274  O   TYR  33  20.514  25.192  53.006  1.000 11.50
ANISOU  274  O   TYR  33  1204    1375    1791   -98  -270 2 8 1
ATOM    275  N   LEU  34  18.399  26.049  53.000  1.000 11.28
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ANISOU 275   N    LEU  34    1159      1265      1862     -210  -149 1 2 1
ATOM    276   CA   LEU  34   18.577    26.942    51.864   1.000 12.99
ANISOU 276   CA   LEU  34    1565      1444      1926      81 -478   2 7 4
ATOM    277   CB   LEU  34   17.757    26.420    50.682   1.000 13.96
ANISOU 277   CB   LEU  34    2007      1301      1995     -430  -459 3 2 1
ATOM    278   CG   LEU  34   17.990    27.112    49.334   1.000 13.81
ANISOU 278   CG   LEU  34    2085      1322      1839     -331  -365 1 9 8
ATOM    279   CD1  LEU  34   19.308    26.691    48.704   1.000 15.94
ANISOU 279   CD1  LEU  34    2123      1793      2140      -10  -313 6 0 7
ATOM    280   CD2  LEU  34   16.818    26.799    48.411   1.000 16.36
ANISOU 280   CD2  LEU  34    2186      1837      2193      122  -721 1 3 4
ATOM    281   C    LEU  34   18.195    28.361    52.241   1.000 13.03
ANISOU 281   C    LEU  34    1676      1418      1857      31 -643   2 1 8
ATOM    282   O    LEU  34   17.055    28.647    52.595   1.000 13.99
ANISOU 282   O    LEU  34    1690      1281      2344      140  -714 8 5
ATOM    283   N    THR  35   19.148    29.283    52.175   1.000 15.03
ANISOU 283   N    THR  35    1837      1584      2288     -118  -625 - 3
ATOM    284   CA   THR  35   18.918    30.704    52.369   1.000 14.80
ANISOU 284   CA   THR  35    1866      1560      2196     -169  -175 - 1 4 4
ATOM    285   CB   THR  35   20.013    31.366    53.232   1.000 15.65
ANISOU 285   CB   THR  35    2025      1719      2202     -149  -204 - 2 8 1
ATOM    286   OG1  THR  35   21.276    31.115    52.601   1.000 18.81
ANISOU 286   OG1  THR  35    1885      2679      2583     -279  -229 - 7 2 8
ATOM    287   CG2  THR  35   20.138    30.811    54.622   1.000 18.84
ANISOU 287   CG2  THR  35    2523      2207      2427     -850  -510 1 5 5
ATOM    288   C    THR  35   18.915    31.456    51.043   1.000 15.07
ANISOU 288   C    THR  35    1904      1473      2348      -57  -283 - 7 0
ATOM    289   O    THR  35   19.209    30.909    49.973   1.000 15.00
ANISOU 289   O    THR  35    2034      1520      2145     -215  -372 8 9
ATOM    290   N    ASP  36   18.564    32.739    51.086   1.000 17.46
ANISOU 290   N    ASP  36    2302      1366      2968     -209  -766 - 1 2 0
ATOM    291   CA   ASP  36   18.618    33.606    49.924   1.000 17.91
ANISOU 291   CA   ASP  36    2150      1592      3063      112  -660 8 6
ATOM    292   CB   ASP  36   20.063    33.845    49.471   1.000 17.91
ANISOU 292   CB   ASP  36    2153      1584      3067      84 -587   - 4 2
ATOM    293   CG   ASP  36   20.948    34.545    50.469   1.000 19.23
ANISOU 293   CG   ASP  36    2575      2160      2571     -642  -324 1 8 1
ATOM    294   OD1  ASP  36   20.426    35.304    51.325   1.000 24.17
ANISOU 294   OD1  ASP  36    2843      3055      3284      152  -1013 - 6 5 2
ATOM    295   OD2  ASP  36   22.199    34.355    50.412   1.000 21.00
ANISOU 295   OD2  ASP  36    2637      2571      2772     -382  -834 - 3 9 3
ATOM    296   C    ASP  36   17.783    33.038    48.784   1.000 18.20
ANISOU 296   C    ASP  36    2402      1736      2779     -446  -390 1 9 1
ATOM    297   O    ASP  36   18.222    33.063    47.629   1.000 18.98
ANISOU 297   O    ASP  36    2127      2022      3062     -464  -60  - 2 5 2
ATOM    298   N    CYS  37   16.593    32.547    49.077   1.000 17.22
ANISOU 298   N    CYS  37    1873      2190      2479      63 -350   - 1
ATOM    299   CA   CYS  37   15.730    31.945    48.043   1.000 15.98
ANISOU 299   CA   CYS  37    1997      1590      2485     -81   -65  - 1 8 4
ATOM    300   CB   CYS  37   15.621    30.423    48.252   1.000 18.87
ANISOU 300   CB   CYS  37    2112      1790      3268     -114  -405 5 7 0
ATOM    301   SG   CYS  37   14.753    29.917    49.759   1.000 19.42
ANISOU 301   SG   CYS  37    2532      1683      3164     -74   -230 3 2 2
ATOM    302   C    CYS  37   14.349    32.580    47.958   1.000 16.12
ANISOU 302   C    CYS  37    1992      1669      2465     -175  -504 1 6
ATOM    303   O    CYS  37   13.483    32.032    47.253   1.000 20.60
ANISOU 303   O    CYS  37    2761      1769      3296     -241  -1333 5 1
ATOM    304   N    GLY  38   14.125    33.714    48.617   1.000 17.89
ANISOU 304   N    GLY  38    1847      1572      3381      209  -898 - 1 1 1
ATOM    305   CA   GLY  38   12.850    34.404    48.587   1.000 18.16
ANISOU 305   CA   GLY  38    1608      2126      3164      141  -999 - 6
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- 100 -

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ATOM    306  C    GLY  38  11.843  33.864  49.589  1.000 21.98
ANISOU  306  C    GLY  38   2598    2574    3180    262   -97  -455
ATOM    307  O    GLY  38  10.677  34.273  49.499  1.000 22.75
ANISOU  307  O    GLY  38   2542    3027    3073    241    79  -97
ATOM    308  N    LEU  39  12.241  32.982  50.501  1.000 21.93
ANISOU  308  N    LEU  39   2112    3318    2903    -65  -102 -154
ATOM    309  CA   LEU  39  11.443  32.357  51.545  1.000 26.16
ANISOU  309  CA   LEU  39   3141    3610    3188  -1071   162  -400
ATOM    310  CB   LEU  39  11.220  30.868  51.277  1.000 28.13
ANISOU  310  CB   LEU  39   2980    3192    4516   -352  -848 258
ATOM    311  CG   LEU  39  10.296  30.434  50.157  1.000 27.39
ANISOU  311  CG   LEU  39   3352    2591    4463    541  -637 -1052
ATOM    312  CD1  LEU  39  10.472  28.940  49.910  1.000 28.66
ANISOU  312  CD1  LEU  39   3375    2293    5221    581  -150 -190
ATOM    313  CD2  LEU  39   8.838  30.768  50.478  1.000 30.62
ANISOU  313  CD2  LEU  39   3155    2985    5496   1275 -1485 -208
ATOM    314  C    LEU  39  12.060  32.430  52.949  1.000 26.26
ANISOU  314  C    LEU  39   2868    3969    3143   -796   170  335
ATOM    315  O    LEU  39  13.105  31.861  53.266  1.000 35.57
ANISOU  315  O    LEU  39   4990    4057    4470    804  -630 320
ATOM    316  N    THR  40  11.388  33.136  53.827  1.000 26.61
ANISOU  316  N    THR  40   3425    3883    2803   -703  -191 102
ATOM    317  CA   THR  40  11.676  33.329  55.228  1.000 22.95
ANISOU  317  CA   THR  40   1972    3864    2886      4  -608  518
ATOM    318  C    THR  40  10.380  33.424  56.031  1.000 27.03
ANISOU  318  C    THR  40   2331    4900    3040   -690  -220  -3
ATOM    319  O    THR  40   9.254  33.316  55.537  1.000 25.98
ANISOU  319  O    THR  40   2148    4860    2864   -546    36 -720
ATOM    320  CB   THR  40  12.476  34.624  55.456  1.000 27.16
ANISOU  320  CB   THR  40   2646    4799    2874   -932  -391 148
ATOM    321  OG1  THR  40  11.639  35.687  54.986  1.000 36.24
ANISOU  321  OG1  THR  40   5158    3872    4740   -472  -136 660
ATOM    322  CG2  THR  40  13.771  34.669  54.659  1.000 34.29
ANISOU  322  CG2  THR  40   5268    3289    4470  -1303  2206 429
ATOM    323  N    ASP  41  10.524  33.635  57.346  1.000 28.20
ANISOU  323  N    ASP  41   2270    5223    3223   -711  -317 -479
ATOM    324  CA   ASP  41   9.324  33.604  58.191  1.000 25.10
ANISOU  324  CA   ASP  41   1935    4633    2968     13  -551  -505
ATOM    325  C    ASP  41   8.418  34.785  57.896  1.000 24.69
ANISOU  325  C    ASP  41   2686    3839    2855   -446  -749 -241
ATOM    326  O    ASP  41   7.219  34.846  58.163  1.000 24.79
ANISOU  326  O    ASP  41   2757    2721    3941    174  -584 -141
ATOM    327  CB   ASP  41   9.728  33.549  59.678  1.000 28.21
ANISOU  327  CB   ASP  41   2221    5503    2995    892  -594 -555
ATOM    328  CG   ASP  41   9.892  32.129  60.180  1.000 42.46
ANISOU  328  CG   ASP  41   6437    5911    3784  -1196 -1257 826
ATOM    329  OD1  ASP  41   9.705  31.161  59.401  1.000 55.96
ANISOU  329  OD1  ASP  41  12184    5138    3940  -2654   -82 1249
ATOM    330  OD2  ASP  41  10.214  31.951  61.383  1.000 61.55
ANISOU  330  OD2  ASP  41  10370    7470    5548  -4396 -4720 2309
ATOM    331  N    THR  42   8.991  35.807  57.305  1.000 29.30
ANISOU  331  N    THR  42   3761    4531    2839  -1404 -1089  -72
ATOM    332  CA   THR  42   8.255  36.976  56.863  1.000 33.69
ANISOU  332  CA   THR  42   4852    3472    4475  -1524  -819 -127
ATOM    333  C    THR  42   7.199  36.598  55.834  1.000 29.14
ANISOU  333  C    THR  42   3354    3051    4667    204  -648 -277
ATOM    334  O    THR  42   6.026  36.969  55.844  1.000 36.90
ANISOU  334  O    THR  42   3578    2980    7462    603  -176 643
ATOM    335  CB   THR  42   9.282  37.967  56.281  1.000 40.80
ANISOU  335  CB   THR  42   5831    4318    5354  -2254  -450  3 7
ATOM    336  OG1  THR  42  10.288  38.317  57.263  1.000 46.30
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ANISOU 336  OG1 THR 42   6998      3682      6912    -3163 -1478 1 7 7
ATOM   337  CG2 THR 42   8.582    39.253    55.872   1.000 45.59
ANISOU 337  CG2 THR 42   9083      3877      4363    -2166 -1048 2 3 8
ATOM   338  N   GLU 43   7.573    35.773    54.862   1.000 31.74
ANISOU 338  N   GLU 43   3380      4360      4319    -673  -223 - 7 8 2
ATOM   339  CA  GLU 43   6.647    35.355    53.810   1.000 35.40
ANISOU 339  CA  GLU 43   4856      4683      3913    -1510 -860 3 2 9
ATOM   340  C   GLU 43   5.643    34.324    54.330   1.000 28.03
ANISOU 340  C   GLU 43   2988      3297      4363    -41   -919 1 6 8
ATOM   341  O   GLU 43   4.560    34.138    53.764   1.000 38.18
ANISOU 341  O   GLU 43   3818      2970      7717    -66   -2774 1 4 6 9
ATOM   342  CB  GLU 43   7.423    34.811    52.608   1.000 38.89
ANISOU 342  CB  GLU 43   4464      6532      3779    -2546 -860 - 3 9 3
ATOM   343  CG  GLU 43   8.462    35.745    52.010   1.000 45.47
ANISOU 343  CG  GLU 43   5175      7105      5377    -2936 -92 - 2 8 9
ATOM   344  CD  GLU 43   9.750    35.764    52.826   1.000 46.40
ANISOU 344  CD  GLU 43   4506      7977      5145    -3155 548 - 1 2 1 0
ATOM   345  OE1 GLU 43   9.775    36.447    53.880   1.000 55.20
ANISOU 345  OE1 GLU 43   8741      7607      4627    -2062 -1002 - 6 6 9
ATOM   346  OE2 GLU 43   10.706   35.080    52.433   1.000 56.77
ANISOU 346  OE2 GLU 43   4592      8930      8050    -2652 939 - 1 2 5 8
ATOM   347  N   LEU 44   5.980    33.645    55.426   1.000 22.72
ANISOU 347  N   LEU 44   2508      2161      3964    464   -476 - 4 5 0
ATOM   348  CA  LEU 44   5.117    32.592    55.959   1.000 26.76
ANISOU 348  CA  LEU 44   4009      1973      4187    140   570 - 9 8 6
ATOM   349  CB  LEU 44   5.978    31.585    56.727   1.000 28.25
ANISOU 349  CB  LEU 44   5094      2194      3448    -153  277 - 5 6 2
ATOM   350  CG  LEU 44   5.284    30.494    57.533   1.000 32.03
ANISOU 350  CG  LEU 44   5971      2801      3398    -279  1192 - 6 2 7
ATOM   351  CD1 LEU 44   4.485    29.535    56.656   1.000 37.95
ANISOU 351  CD1 LEU 44   7665      2239      4514    -1148 2039 - 1 4 0 3
ATOM   352  CD2 LEU 44   6.302    29.703    58.361   1.000 36.97
ANISOU 352  CD2 LEU 44   7096      2869      4080    1150  2171 1 8 6
ATOM   353  C   LEU 44   4.000    33.145    56.841   1.000 31.10
ANISOU 353  C   LEU 44   3835      3182      4800    -700  837 - 2 2 0 5
ATOM   354  O   LEU 44   2.913    32.543    56.867   1.000 30.19
ANISOU 354  O   LEU 44   4402      3299      3768    -1248 870 - 2 1 6 5
ATOM   355  N   ALA 45   4.238    34.247    57.547   1.000 28.74
ANISOU 355  N   ALA 45   2897      2938      5083    -562  710 - 2 0 6 1
ATOM   356  CA  ALA 45   3.382    34.751    58.623   1.000 27.09
ANISOU 356  CA  ALA 45   2716      2817      4761    -751  467 - 2 1 4 0
ATOM   357  C   ALA 45   1.943    35.014    58.195   1.000 24.95
ANISOU 357  C   ALA 45   2697      3110      3673    -784  709 - 1 2 5 7
ATOM   358  O   ALA 45   1.021    34.515    58.875   1.000 22.50
ANISOU 358  O   ALA 45   2762      2585      3201    -565  560 - 1 1 4 6
ATOM   359  CB  ALA 45   3.975    36.005    59.248   1.000 36.30
ANISOU 359  CB  ALA 45   3259      4219      6315    -1912 1332 - 3 4 0 4
ATOM   360  N   SER 46   1.729    35.779    57.128   1.000 26.85
ANISOU 360  N   SER 46   3258      3756      3187    -1732 618 - 1 1 8 4
ATOM   361  CA  SER 46   0.380    36.052    56.642   1.000 24.97
ANISOU 361  CA  SER 46   3686      3189      2611    -1223 511 - 1 1 0 5
ATOM   362  CB  SER 46   0.422    36.950    55.392   1.000 32.35
ANISOU 362  CB  SER 46   5428      3467      3395    -2232 70 - 4 5 8
ATOM   363  OG  SER 46   0.630    38.289    55.772   1.000 45.77
ANISOU 363  OG  SER 46   7730      3349      6313    -2746 2499 - 8 0 7
ATOM   364  C   SER 46   -0.408   34.787    56.307   1.000 20.63
ANISOU 364  C   SER 46   2797      2469      2572    -423  -151 - 5 4 2
ATOM   365  O   SER 46   -1.578   34.672    56.698   1.000 21.93
ANISOU 365  O   SER 46   3120      2486      2725    -559  305 - 4 0 3
ATOM   366  N   ALA 47   0.211    33.855    55.590   1.000 22.39
ANISOU 366  N   ALA 47   3096      2167      3244    -488  394 - 3 6 8
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- 102 -

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ATOM     367  CA  ALA  47  -0.397  32.596  55.176  1.000 19.54
ANISOU   367  CA  ALA  47  2746    1863    2814    -289   362  -18
ATOM     368  CB  ALA  47   0.548  31.900  54.191  1.000 23.54
ANISOU   368  CB  ALA  47  3524    1717    3705    -617  1237  -159
ATOM     369  C   ALA  47  -0.715  31.714  56.381  1.000 19.95
ANISOU   369  C   ALA  47  2282    2546    2752    -327    19  257
ATOM     370  O   ALA  47  -1.836  31.199  56.518  1.000 19.66
ANISOU   370  O   ALA  47  2489    2589    2393    -614   211  -165
ATOM     371  N   LYS  48   0.270  31.558  57.268  1.000 18.24
ANISOU   371  N   LYS  48  2713    1966    2253    -210  -139  -912
ATOM     372  CA  LYS  48   0.042  30.782  58.486  1.000 19.33
ANISOU   372  CA  LYS  48  2398    2625    2321     43   -312  -563
ATOM     373  C   LYS  48  -1.110  31.329  59.322  1.000 20.57
ANISOU   373  C   LYS  48  2476    2556    2785    -326    83  -566
ATOM     374  O   LYS  48  -2.022  30.613  59.771  1.000 20.34
ANISOU   374  O   LYS  48  3207    2598    1923    -521   139  -340
ATOM     375  CB  LYS  48   1.352  30.758  59.294  1.000 24.61
ANISOU   375  CB  LYS  48  2400    3792    3158    -258  -556  -80
ATOM     376  CG  LYS  48   1.237  29.873  60.531  1.000 30.84
ANISOU   376  CG  LYS  48  4306    4044    3366    -291 -1504  277
ATOM     377  CD  LYS  48   1.837  30.575  61.736  1.000 41.45
ANISOU   377  CD  LYS  48  6742    5755    3251   -1067 -1382  -356
ATOM     378  CE  LYS  48   1.625  29.717  62.966  1.000 41.63
ANISOU   378  CE  LYS  48  6620    6124    3073    -466 -1047  -353
ATOM     379  NZ  LYS  48   1.074  30.497  64.112  1.000 42.62
ANISOU   379  NZ  LYS  48  5883    6866    3444    460  -1193  -425
ATOM     380  N   ASP  49  -1.110  32.625  59.607  1.000 19.18
ANISOU   380  N   ASP  49  2348    2602    2337    -464   100  -806
ATOM     381  CA  ASP  49  -2.127  33.243  60.433  1.000 21.95
ANISOU   381  CA  ASP  49  2555    2986    2801    -791   617 -1035
ATOM     382  CB  ASP  49  -1.868  34.756  60.611  1.000 23.97
ANISOU   382  CB  ASP  49  2827    2872    3409    -250   -79 -1325
ATOM     383  CG  ASP  49  -0.681  35.078  61.492  1.000 25.41
ANISOU   383  CG  ASP  49  2787    3405    3464    -365   113 -1866
ATOM     384  OD1 ASP  49  -0.153  34.153  62.143  1.000 30.75
ANISOU   384  OD1 ASP  49  3572    4181    3932    -254  -967 -1667
ATOM     385  OD2 ASP  49  -0.235  36.256  61.563  1.000 30.78
ANISOU   385  OD2 ASP  49  3303    3649    4742    -710   344 -2413
ATOM     386  C   ASP  49  -3.543  33.061  59.904  1.000 21.44
ANISOU   386  C   ASP  49  2465    2651    3030    -388   540  -900
ATOM     387  O   ASP  49  -4.476  32.770  60.654  1.000 20.72
ANISOU   387  O   ASP  49  2346    2181    3347    -279   550  -726
ATOM     388  N   LEU  50  -3.731  33.269  58.596  1.000 23.28
ANISOU   388  N   LEU  50  2942    2712    3191   -1251   216  -644
ATOM     389  CA  LEU  50  -5.086  33.185  58.068  1.000 22.94
ANISOU   389  CA  LEU  50  3104    1796    3815    -575  -205 -1079
ATOM     390  CB  LEU  50  -5.204  33.861  56.696  1.000 28.78
ANISOU   390  CB  LEU  50  3948    2453    4535    -852  -755  -254
ATOM     391  CG  LEU  50  -6.620  34.246  56.260  1.000 25.30
ANISOU   391  CG  LEU  50  3800    2294    3520     30   325  -531
ATOM     392  CD1 LEU  50  -7.552  34.478  57.441  1.000 44.77
ANISOU   392  CD1 LEU  50  6382    4432    6196    -475  3026 -1060
ATOM     393  CD2 LEU  50  -6.625  35.485  55.385  1.000 32.52
ANISOU   393  CD2 LEU  50  5861    1962    4533    752   354  -433
ATOM     394  C   LEU  50  -5.566  31.737  57.982  1.000 21.12
ANISOU   394  C   LEU  50  2559    1870    3595    -643   742 -1270
ATOM     395  O   LEU  50  -6.772  31.494  58.175  1.000 21.13
ANISOU   395  O   LEU  50  2491    2457    3083    -543   579 -1097
ATOM     396  N   VAL  51  -4.681  30.769  57.715  1.000 16.27
ANISOU   396  N   VAL  51  2517    1843    1823    -302    -3  -646
ATOM     397  CA  VAL  51  -5.186  29.370  57.701  1.000 18.07
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SUBSTITUTE SHEET (RULE 26)

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ANISOU 397   CA   VAL  51   3154      1763      1947      -401  -15   -427
ATOM   398   CB   VAL  51  -4.281  28.415  56.889  1.000 16.07
ANISOU 398   CB   VAL  51   2981      1629      1496      -621 -255 -501
ATOM   399   CG1  VAL  51  -3.002  28.114  57.663  1.000 18.99
ANISOU 399   CG1  VAL  51   2959      2382      1875      -383 -100 302
ATOM   400   CG2  VAL  51  -5.006  27.119  56.497  1.000 22.16
ANISOU 400   CG2  VAL  51   4569      2121      1728     -1393  64  -869
ATOM   401   C    VAL  51  -5.446  28.899  59.114  1.000 17.74
ANISOU 401   C    VAL  51   2508      2223      2009      -435  142  -445
ATOM   402   O    VAL  51  -6.430  28.187  59.346  1.000 19.76
ANISOU 402   O    VAL  51   3005      2160      2345      -692  726 -1021
ATOM   403   N    ILE  52  -4.671  29.263  60.125  1.000 20.23
ANISOU 403   N    ILE  52   2980      2945      1760      -649  364  -902
ATOM   404   CA   ILE  52  -4.990  28.875  61.507  1.000 20.17
ANISOU 404   CA   ILE  52   3200      2665      1800      -758  627 -1134
ATOM   405   CB   ILE  52  -3.847  29.230  62.469  1.000 21.31
ANISOU 405   CB   ILE  52   3294      3151      1652      -449  462 -1043
ATOM   406   CG2  ILE  52  -4.238  29.178  63.931  1.000 21.29
ANISOU 406   CG2  ILE  52   3543      2826      1719      -362  529  -689
ATOM   407   CG1  ILE  52  -2.619  28.346  62.217  1.000 25.37
ANISOU 407   CG1  ILE  52   3213      3819      2608      -307  727 -1090
ATOM   408   CD1  ILE  52  -2.871  26.872  62.470  1.000 28.56
ANISOU 408   CD1  ILE  52   3474      3578      3798       106  178 -1110
ATOM   409   C    ILE  52  -6.284  29.514  61.950  1.000 22.44
ANISOU 409   C    ILE  52   3119      3216      2190      -710  645 -1228
ATOM   410   O    ILE  52  -7.072  28.856  62.647  1.000 23.23
ANISOU 410   O    ILE  52   3390      3654      1781      -766  758 -1246
ATOM   411   N    ASP  53  -6.519  30.754  61.530  1.000 23.33
ANISOU 411   N    ASP  53   2897      3064      2903      -626  700 -1361
ATOM   412   CA   ASP  53  -7.826  31.335  61.897  1.000 24.49
ANISOU 412   CA   ASP  53   2818      3347      3141      -759  781 -1545
ATOM   413   CB   ASP  53  -7.942  32.781  61.411  1.000 27.43
ANISOU 413   CB   ASP  53   2854      3335      4235      -434  819 -1446
ATOM   414   CG   ASP  53  -9.309  33.397  61.570  1.000 30.99
ANISOU 414   CG   ASP  53   3166      4281      4326        36 1242 -1214
ATOM   415   OD1  ASP  53  -9.657  33.779  62.705  1.000 37.26
ANISOU 415   OD1  ASP  53   4369      4569      5220       153 1263 -2733
ATOM   416   OD2  ASP  53 -10.050  33.491  60.553  1.000 38.45
ANISOU 416   OD2  ASP  53   3393      6043      5173       810  557 -1648
ATOM   417   C    ASP  53  -8.953  30.495  61.316  1.000 24.64
ANISOU 417   C    ASP  53   3028      3701      2634      -919  372 -1031
ATOM   418   O    ASP  53 -10.011  30.327  61.915  1.000 28.52
ANISOU 418   O    ASP  53   3399      3835      3603     -1519  962 -2151
ATOM   419   N    PHE  54  -8.744  29.978  60.108  1.000 22.04
ANISOU 419   N    PHE  54   2921      2974      2479      -573  174  -704
ATOM   420   CA   PHE  54  -9.772  29.187  59.432  1.000 19.99
ANISOU 420   CA   PHE  54   2253      2879      2463      -421  771  -978
ATOM   421   CB   PHE  54  -9.423  29.030  57.942  1.000 18.45
ANISOU 421   CB   PHE  54   2856      1983      2171       -65  426  -518
ATOM   422   CG   PHE  54 -10.493  28.292  57.145  1.000 21.36
ANISOU 422   CG   PHE  54   3063      2735      2318      -646  599  -627
ATOM   423   CD1  PHE  54 -11.714  28.906  56.933  1.000 23.18
ANISOU 423   CD1  PHE  54   3199      2783      2826      -703  -29  -624
ATOM   424   CD2  PHE  54 -10.293  27.035  56.619  1.000 23.32
ANISOU 424   CD2  PHE  54   3482      2802      2577      -689  212  -858
ATOM   425   CE1  PHE  54 -12.719  28.291  56.241  1.000 26.45
ANISOU 425   CE1  PHE  54   3345      3696      3008     -1418  129  -554
ATOM   426   CE2  PHE  54 -11.303  26.375  55.921  1.000 25.65
ANISOU 426   CE2  PHE  54   3750      3815      2182     -1404  607 -1005
ATOM   427   CZ   PHE  54 -12.522  27.013  55.725  1.000 26.17
ANISOU 427   CZ   PHE  54   3433      3830      2679     -1829  298  -813
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ATOM     428  C   PHE  54   -9.959 27.854 60.132 1.000 19.44
ANISOU   428  C   PHE  54   2340    3430    1617   -834  319  -759
ATOM     429  O   PHE  54  -11.087 27.450 60.386 1.000 22.11
ANISOU   429  O   PHE  54   2601    3066    2734   -948 1018 -1466
ATOM     430  N   PHE  55   -8.882 27.166 60.448 1.000 20.59
ANISOU   430  N   PHE  55   2728    3375    1720   -666  180  -611
ATOM     431  CA  PHE  55   -8.966 25.927 61.212 1.000 22.59
ANISOU   431  CA  PHE  55   3092    3671    1820   -728  381  -372
ATOM     432  CB  PHE  55   -7.579 25.360 61.478 1.000 21.93
ANISOU   432  CB  PHE  55   3163    3622    1549   -692  287  -158
ATOM     433  CG  PHE  55   -6.790 24.833 60.284 1.000 20.60
ANISOU   433  CG  PHE  55   3034    2998    1793  -1004  365  -375
ATOM     434  CD1 PHE  55   -7.352 24.526 59.057 1.000 18.72
ANISOU   434  CD1 PHE  55   2300    3095    1717  -1078  586  -271
ATOM     435  CD2 PHE  55   -5.430 24.615 60.385 1.000 18.06
ANISOU   435  CD2 PHE  55   3132    2490    1241   -926  128  -497
ATOM     436  CE1 PHE  55   -6.609 24.037 58.014 1.000 18.92
ANISOU   436  CE1 PHE  55   2455    2761    1971   -844  436  -542
ATOM     437  CE2 PHE  55   -4.672 24.124 59.352 1.000 18.58
ANISOU   437  CE2 PHE  55   3291    2606    1163   -478   63  -299
ATOM     438  CZ  PHE  55   -5.256 23.814 58.134 1.000 17.68
ANISOU   438  CZ  PHE  55   2660    2567    1490   -380  129  -806
ATOM     439  C   PHE  55   -9.684 26.111 62.546 1.000 24.99
ANISOU   439  C   PHE  55   3310    4138    2046   -830  647  -415
ATOM     440  O   PHE  55  -10.532 25.281 62.872 1.000 30.29
ANISOU   440  O   PHE  55   3802    4943    2763  -1527 1314 -1102
ATOM     441  N   GLU  56   -9.330 27.144 63.311 1.000 23.65
ANISOU   441  N   GLU  56   2864    4109    2013   -634  937  -525
ATOM     442  CA  GLU  56   -9.868 27.355 64.636 1.000 30.01
ANISOU   442  CA  GLU  56   3632    5378    2394  -1050 1465  -994
ATOM     443  CB  GLU  56   -8.998 28.333 65.436 1.000 36.40
ANISOU   443  CB  GLU  56   4531    6933    2367  -1606 1318 -1623
ATOM     444  CG  GLU  56   -7.666 27.827 65.916 1.000 41.89
ANISOU   444  CG  GLU  56   5006    8196    2713  -1457  404 -1900
ATOM     445  CD  GLU  56   -6.787 28.880 66.575 1.000 48.94
ANISOU   445  CD  GLU  56   6081    9310    3202  -2278  -73 -2062
ATOM     446  OE1 GLU  56   -5.694 28.515 67.078 1.000 60.73
ANISOU   446  OE1 GLU  56   8034   12274    2769  -3208 -2335  266
ATOM     447  OE2 GLU  56   -7.145 30.084 66.614 1.000 58.51
ANISOU   447  OE2 GLU  56   8742    9338    4151  -2088 1096 -3951
ATOM     448  C   GLU  56  -11.289 27.920 64.617 1.000 30.60
ANISOU   448  C   GLU  56   3764    4923    2941   -977 1967 -1271
ATOM     449  O   GLU  56  -12.058 27.542 65.504 1.000 35.21
ANISOU   449  O   GLU  56   4384    5304    3690  -1136 2652 -1235
ATOM     450  N   HIS  57  -11.603 28.805 63.673 1.000 30.00
ANISOU   450  N   HIS  57   3730    4846    2823   -654 1684 -1582
ATOM     451  CA  HIS  57  -12.854 29.559 63.759 1.000 33.51
ANISOU   451  CA  HIS  57   3853    5101    3778   -519 1673 -1911
ATOM     452  CB  HIS  57  -12.536 31.046 63.991 1.000 33.40
ANISOU   452  CB  HIS  57   3844    5183    3664   -411 1546 -2250
ATOM     453  CG  HIS  57  -11.577 31.344 65.095 1.000 35.13
ANISOU   453  CG  HIS  57   4497    5409    3444   -505 1340 -1992
ATOM     454  CD2 HIS  57  -10.361 31.946 65.071 1.000 35.26
ANISOU   454  CD2 HIS  57   4837    5214    3345   -834  637 -1456
ATOM     455  ND1 HIS  57  -11.819 31.021 66.411 1.000 40.52
ANISOU   455  ND1 HIS  57   6021    5885    3490  -1360 1474 -2002
ATOM     456  CE1 HIS  57  -10.798 31.410 67.151 1.000 42.28
ANISOU   456  CE1 HIS  57   6680    6066    3320  -1632 1099 -1772
ATOM     457  NE2 HIS  57   -9.902 31.970 66.362 1.000 41.69
ANISOU   457  NE2 HIS  57   6377    6133    3329  -1817  407 -1148
ATOM     458  C   HIS  57  -13.769 29.466 62.547 1.000 32.58
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ANISOU 458  C   HIS 57  3083    5097    4199   -729 1723 -2066
ATOM   459  O   HIS 57  -14.902 29.965 62.578 1.000 33.80
ANISOU 459  O   HIS 57  3121    5097    4625   -731 1865 -2565
ATOM   460  N   GLY 58  -13.370 28.866 61.432 1.000 28.78
ANISOU 460  N   GLY 58  2841    4353    3742   -253 1341 -1506
ATOM   461  CA  GLY 58  -14.326 28.685 60.332 1.000 26.99
ANISOU 461  CA  GLY 58  2471    3916    3869   24 1298  -1173
ATOM   462  C   GLY 58  -15.447 27.737 60.738 1.000 29.94
ANISOU 462  C   GLY 58  2665    4357    4353   -261 1323 -1058
ATOM   463  O   GLY 58  -15.241 26.805 61.534 1.000 29.23
ANISOU 463  O   GLY 58  2976    4044    4087   -571 1192 -1297
ATOM   464  N   SER 59  -16.635 27.958 60.193 1.000 27.61
ANISOU 464  N   SER 59  2556    3905    4029   -108 1461 -1767
ATOM   465  CA  SER 59  -17.812 27.153 60.497 1.000 28.42
ANISOU 465  CA  SER 59  2675    4074    4049   -189 1294 -1325
ATOM   466  CB  SER 59  -19.121 27.889 60.162 1.000 28.29
ANISOU 466  CB  SER 59  2556    4574    3618   -339 1198 -928
ATOM   467  OG  SER 59  -19.229 27.978 58.739 1.000 28.66
ANISOU 467  OG  SER 59  3598    3742    3547   166 1729 -867
ATOM   468  C   SER 59  -17.795 25.843 59.724 1.000 29.57
ANISOU 468  C   SER 59  3467    3990    3779   -646 1463 -1206
ATOM   469  O   SER 59  -16.990 25.651 58.810 1.000 22.72
ANISOU 469  O   SER 59  3054    3042    2537   -144 648  -369
ATOM   470  N   GLU 60  -18.698 24.939 60.103 1.000 26.90
ANISOU 470  N   GLU 60  2413    3900    3907   -69 1079 -853
ATOM   471  CA  GLU 60  -18.699 23.684 59.359 1.000 26.98
ANISOU 471  CA  GLU 60  2699    3515    4037   -98 709 -537
ATOM   472  CB  GLU 60  -19.646 22.681 60.001 1.000 39.11
ANISOU 472  CB  GLU 60  5393    4393    5075   -1361 908 364
ATOM   473  CG  GLU 60  -19.011 21.665 60.917 1.000 44.63
ANISOU 473  CG  GLU 60  5606    5473    5878   -977 1079 1219
ATOM   474  CD  GLU 60  -17.507 21.543 60.797 1.000 48.52
ANISOU 474  CD  GLU 60  5714    6217    6503   -390 1207 877
ATOM   475  OE1 GLU 60  -17.030 21.223 59.684 1.000 48.11
ANISOU 475  OE1 GLU 60  5349    7545    5384   709 366 1951
ATOM   476  OE2 GLU 60  -16.828 21.763 61.829 1.000 46.50
ANISOU 476  OE2 GLU 60  4926    5742    7000   1158 1550 -1504
ATOM   477  C   GLU 60  -19.091 23.960 57.915 1.000 25.30
ANISOU 477  C   GLU 60  2829    2728    4055   86 725 -656
ATOM   478  O   GLU 60  -18.529 23.346 57.027 1.000 24.18
ANISOU 478  O   GLU 60  2119    2980    4091   -202 741 -752
ATOM   479  N   ALA 61  -20.032 24.890 57.716 1.000 25.58
ANISOU 479  N   ALA 61  2083    3206    4432   -34 612 -774
ATOM   480  CA  ALA 61  -20.495 25.212 56.368 1.000 24.05
ANISOU 480  CA  ALA 61  1838    2999    4301   228 720 -1055
ATOM   481  CB  ALA 61  -21.670 26.176 56.459 1.000 27.53
ANISOU 481  CB  ALA 61  2807    1857    5797   394 704 -606
ATOM   482  C   ALA 61  -19.385 25.790 55.500 1.000 27.31
ANISOU 482  C   ALA 61  3170    2572    4633   -377 1178 -1026
ATOM   483  O   ALA 61  -19.247 25.467 54.311 1.000 22.29
ANISOU 483  O   ALA 61  2363    1876    4232   42 661 -319
ATOM   484  N   GLU 62  -18.580 26.642 56.118 1.000 22.18
ANISOU 484  N   GLU 62  2075    2258    4094   396 569 -394
ATOM   485  CA  GLU 62  -17.455 27.258 55.416 1.000 24.19
ANISOU 485  CA  GLU 62  2401    2603    4188   150 852 -590
ATOM   486  CB  GLU 62  -16.806 28.354 56.277 1.000 24.68
ANISOU 486  CB  GLU 62  2401    2490    4485   91 1273 -828
ATOM   487  CG  GLU 62  -17.641 29.636 56.356 1.000 25.19
ANISOU 487  CG  GLU 62  2542    2620    4409   353 421 -685
ATOM   488  CD  GLU 62  -17.288 30.581 57.480 1.000 29.27
ANISOU 488  CD  GLU 62  3284    2991    4845   621 515 -1290
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ATOM    489  OE1 GLU   62     -16.527 30.241  58.410  1.000 30.11
ANISOU  489  OE1 GLU   62    3231    3067    5143     318    56 -1639
ATOM    490  OE2 GLU   62     -17.796 31.739  57.436  1.000 35.30
ANISOU  490  OE2 GLU   62    4832    2994    5584     863   109 -1327
ATOM    491  C   GLU   62     -16.409 26.226  55.025  1.000 21.70
ANISOU  491  C   GLU   62    2394    2421    3430      30   784  -579
ATOM    492  O   GLU   62     -15.818 26.218  53.940  1.000 19.44
ANISOU  492  O   GLU   62    2095    2140    3153    -301   467  -604
ATOM    493  N   LYS   63     -16.184 25.308  55.972  1.000 20.08
ANISOU  493  N   LYS   63    2472    2266    2893     -74   761  -902
ATOM    494  CA  LYS   63     -15.246 24.227  55.678  1.000 19.73
ANISOU  494  CA  LYS   63    2322    2559    2614     133   429  -903
ATOM    495  CB  LYS   63     -14.934 23.497  56.988  1.000 18.48
ANISOU  495  CB  LYS   63    1803    2743    2476    -218   587  -836
ATOM    496  CG  LYS   63     -13.946 24.240  57.881  1.000 19.17
ANISOU  496  CG  LYS   63    2115    2332    2836    -296   325  -674
ATOM    497  CD  LYS   63     -13.839 23.651  59.290  1.000 26.23
ANISOU  497  CD  LYS   63    2978    4084    2902    -888  -177  -287
ATOM    498  CE  LYS   63     -12.753 24.383  60.068  1.000 27.75
ANISOU  498  CE  LYS   63    3074    5008    2461   -1239   500 -1082
ATOM    499  NZ  LYS   63     -12.929 24.378  61.530  1.000 34.95
ANISOU  499  NZ  LYS   63    3177    7579    2524   -2594   840  -894
ATOM    500  C   LYS   63     -15.789 23.304  54.586  1.000 17.52
ANISOU  500  C   LYS   63    2014    2191    2453      51   529  -691
ATOM    501  O   LYS   63     -15.025 22.953  53.654  1.000 17.58
ANISOU  501  O   LYS   63    2266    1709    2704     158   707  -653
ATOM    502  N   ARG   64     -17.069 22.912  54.641  1.000 19.63
ANISOU  502  N   ARG   64    2081    2452    2926     -14   614  -592
ATOM    503  CA  ARG   64     -17.618 22.041  53.595  1.000 19.00
ANISOU  503  CA  ARG   64    1509    2526    3185      -3   620  -652
ATOM    504  C   ARG   64     -17.471 22.634  52.194  1.000 20.42
ANISOU  504  C   ARG   64    2165    2436    3157    -390   -22  -536
ATOM    505  O   ARG   64     -17.204 21.934  51.195  1.000 18.83
ANISOU  505  O   ARG   64    1854    2184    3115    -434   575  -201
ATOM    506  CB  ARG   64     -19.080 21.670  53.871  1.000 24.70
ANISOU  506  CB  ARG   64    1470    3652    4263     -51   841  -909
ATOM    507  CG  ARG   64     -19.838 20.933  52.795  1.000 36.49
ANISOU  507  CG  ARG   64    2961    5284    5621   -2020   138  -882
ATOM    508  CD  ARG   64     -21.315 20.645  53.095  1.000 46.32
ANISOU  508  CD  ARG   64    3034    6962    7603   -2438   327 -1187
ATOM    509  NE  ARG   64     -21.776 21.216  54.331  1.000 55.81
ANISOU  509  NE  ARG   64    3917    8636    8652   -3960  2222 -1870
ATOM    510  CZ  ARG   64     -22.814 21.840  54.811  1.000 58.82
ANISOU  510  CZ  ARG   64    4438    8939    8972   -3479  1988 -2480
ATOM    511  NH1 ARG   64     -23.884 22.106  54.071  1.000 76.83
ANISOU  511  NH1 ARG   64    6024    9527   13641   -1787  -165 -1872
ATOM    512  NH2 ARG   64     -22.797 22.213  56.093  1.000 69.53
ANISOU  512  NH2 ARG   64    7792    9201    9424   -5884  3891 -3304
ATOM    513  N   ALA   65     -17.621 23.947  52.066  1.000 20.43
ANISOU  513  N   ALA   65    1689    2554    3519      24   612  -525
ATOM    514  CA  ALA   65     -17.505 24.656  50.782  1.000 19.45
ANISOU  514  CA  ALA   65    1649    2216    3523     409   184  -553
ATOM    515  CB  ALA   65     -17.912 26.108  50.984  1.000 23.73
ANISOU  515  CB  ALA   65    1420    2019    5579     126  -373  -742
ATOM    516  C   ALA   65     -16.118 24.549  50.168  1.000 17.89
ANISOU  516  C   ALA   65    1524    2099    3173     -47   108  -101
ATOM    517  O   ALA   65     -15.983 24.732  48.954  1.000 18.77
ANISOU  517  O   ALA   65    1830    2178    3123     122    -8  -229
ATOM    518  N   VAL   66     -15.100 24.248  50.973  1.000 17.99
ANISOU  518  N   VAL   66    1547    2151    3137     -86    36  -196
ATOM    519  CA  VAL   66     -13.746 24.066  50.430  1.000 16.74
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ANISOU 519   CA  VAL 66    1553      1859      2948     -62   -56  -254
ATOM   520   CB  VAL 66   -12.775 25.151 50.951 1.000 17.29
ANISOU 520   CB  VAL 66    1805      1804      2963    -330   338  -185
ATOM   521   CG1 VAL 66   -13.238 26.532 50.455 1.000 16.70
ANISOU 521   CG1 VAL 66    1547      1800      2997     111   545  -553
ATOM   522   CG2 VAL 66   -12.652 25.180 52.462 1.000 18.65
ANISOU 522   CG2 VAL 66    2053      1996      3036    -193    17  -538
ATOM   523   C   VAL 66   -13.201 22.680 50.724 1.000 15.66
ANISOU 523   C   VAL 66    1775      1813      2362     -70  -250  -457
ATOM   524   O   VAL 66   -11.972 22.493 50.808 1.000 14.19
ANISOU 524   O   VAL 66    1747      1576      2069    -122   -56  -347
ATOM   525   N   THR 67   -14.071 21.695 50.873 1.000 14.46
ANISOU 525   N   THR 67    1550      1602      2343     126   -48  -722
ATOM   526   CA  THR 67   -13.723 20.279 51.000 1.000 14.06
ANISOU 526   CA  THR 67    1461      1698      2185     234     5  -740
ATOM   527   CB  THR 67   -14.419 19.647 52.225 1.000 15.08
ANISOU 527   CB  THR 67    1721      1955      2053     -51  -426  -444
ATOM   528   OG1 THR 67   -14.089 20.337 53.453 1.000 17.41
ANISOU 528   OG1 THR 67    2538      1949      2128     -39    70  -716
ATOM   529   CG2 THR 67   -13.915 18.215 52.420 1.000 16.63
ANISOU 529   CG2 THR 67    2182      1888      2248     148   293  -658
ATOM   530   C   THR 67   -14.067 19.518 49.728 1.000 12.37
ANISOU 530   C   THR 67    1144      1422      2132     209   -95  -517
ATOM   531   O   THR 67   -15.208 19.567 49.229 1.000 14.82
ANISOU 531   O   THR 67    1197      2086      2350     208  -168  -362
ATOM   532   N   SER 68   -13.092 18.790 49.180 1.000 11.61
ANISOU 532   N   SER 68    1109      1421      1881      37   -58  -534
ATOM   533   CA  SER 68   -13.306 17.955 48.003 1.000 11.45
ANISOU 533   CA  SER 68    1274      1444      1631     -49   -30  -374
ATOM   534   CB  SER 68   -12.027 17.317 47.480 1.000 11.88
ANISOU 534   CB  SER 68    1446      1523      1544      79   252  -157
ATOM   535   OG  SER 68   -11.026 18.292 47.239 1.000 16.95
ANISOU 535   OG  SER 68    1557      2314      2569    -336   389  -218
ATOM   536   C   SER 68   -14.269 16.815 48.319 1.000 11.56
ANISOU 536   C   SER 68    1287      1375      1732     -61    53  -406
ATOM   537   O   SER 68   -14.308 16.384 49.476 1.000 14.62
ANISOU 537   O   SER 68    1998      1860      1697    -538   153  -430
ATOM   538   N   PRO 69   -15.026 16.324 47.344 1.000 12.78
ANISOU 538   N   PRO 69    1476      1473      1905    -243   -88  -194
ATOM   539   CD  PRO 69   -15.130 16.801 45.953 1.000 12.47
ANISOU 539   CD  PRO 69    1022      1808      1909    -199  -203  -144
ATOM   540   CA  PRO 69   -15.941 15.214 47.639 1.000 12.21
ANISOU 540   CA  PRO 69    1358      1369      1913    -178   148  -437
ATOM   541   CB  PRO 69   -16.825 15.193 46.355 1.000 13.94
ANISOU 541   CB  PRO 69    1362      1591      2343    -251  -178   -14
ATOM   542   CG  PRO 69   -15.924 15.715 45.290 1.000 14.38
ANISOU 542   CG  PRO 69    1396      1947      2122    -554  -511   178
ATOM   543   C   PRO 69   -15.270 13.882 47.912 1.000 13.25
ANISOU 543   C   PRO 69    1206      1526      2303    -217  -115  -100
ATOM   544   O   PRO 69   -15.932 12.985 48.481 1.000 14.01
ANISOU 544   O   PRO 69    1753      1450      2122    -373    99  -301
ATOM   545   N   VAL 70   -14.015 13.692 47.554 1.000 13.46
ANISOU 545   N   VAL 70    1288      1479      2348    -174  -108  -265
ATOM   546   CA  VAL 70   -13.184 12.548 47.898 1.000 13.49
ANISOU 546   CA  VAL 70    1404      1692      2030      37   138  -195
ATOM   547   CB  VAL 70   -12.587 11.720 46.737 1.000 16.39
ANISOU 547   CB  VAL 70    2142      1648      2439    -225   614  -452
ATOM   548   CG1 VAL 70   -13.615 10.756 46.208 1.000 33.50
ANISOU 548   CG1 VAL 70    6470      2984      3274   -2702    41  -867
ATOM   549   CG2 VAL 70   -11.995 12.613 45.640 1.000 16.46
ANISOU 549   CG2 VAL 70    1749      2234      2273     269   444    23
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ATOM    550  C   VAL  70    -12.042 13.057  48.782  1.000 13.59
ANISOU  550  C   VAL  70    1618      1382      2163      -38    -114 1 2 7
ATOM    551  O   VAL  70    -11.426 14.105  48.493  1.000 14.20
ANISOU  551  O   VAL  70    1748      1685      1964     -265     26 1 8 2
ATOM    552  N   PRO  71    -11.786 12.365  49.898  1.000 14.21
ANISOU  552  N   PRO  71    1607      1507      2285     -115     -62  3 1 0
ATOM    553  CD  PRO  71    -12.432 11.125  50.378  1.000 14.70
ANISOU  553  CD  PRO  71    1920      1590      2076     -201    646  4
ATOM    554  CA  PRO  71    -10.830 12.919  50.878  1.000 17.41
ANISOU  554  CA  PRO  71    2429      2008      2178     -522   -342 4 1 8
ATOM    555  CB  PRO  71    -11.338 12.304  52.193  1.000 20.87
ANISOU  555  CB  PRO  71    3768      2082      2081     -743    190  1 4
ATOM    556  CG  PRO  71    -11.908 10.989  51.775  1.000 18.28
ANISOU  556  CG  PRO  71    3534      1665      1746     -338    781  - 5 4
ATOM    557  C   PRO  71     -9.384 12.543  50.619  1.000 17.14
ANISOU  557  C   PRO  71    2183      2304      2026     -684   -815 4 4
ATOM    558  O   PRO  71     -8.730 11.796  51.330  1.000 20.54
ANISOU  558  O   PRO  71    2745      2610      2448      -87   -404 4 1 4
ATOM    559  N   THR  72     -8.834 13.111  49.556  1.000 16.59
ANISOU  559  N   THR  72    2156      2046      2103     -235   -508 - 1 7
ATOM    560  CA  THR  72     -7.496 12.818  49.090  1.000 17.43
ANISOU  560  CA  THR  72    2113      1884      2626     -254   -510 - 2 8 8
ATOM    561  CB  THR  72     -7.477 12.829  47.545  1.000 15.98
ANISOU  561  CB  THR  72    1700      1761      2611      211   -458 - 4 2 1
ATOM    562  OG1 THR  72     -8.027 14.094  47.128  1.000 17.28
ANISOU  562  OG1 THR  72    2146      1553      2868       27  -355  - 2 7 1
ATOM    563  CG2 THR  72     -8.348 11.764  46.929  1.000 12.63
ANISOU  563  CG2 THR  72    1296      1581      1923      -46    328  - 1 2 7
ATOM    564  C   THR  72     -6.418 13.805  49.549  1.000 17.83
ANISOU  564  C   THR  72    2153      1773      2847     -155  -1228 2 3 2
ATOM    565  O   THR  72     -5.216 13.536  49.329  1.000 20.17
ANISOU  565  O   THR  72    2142      2265      3257     -225  -1049 4 8 0
ATOM    566  N   MET  73     -6.785 14.920  50.169  1.000 19.43
ANISOU  566  N   MET  73    2876      2052      2455     -782   -451 - 1 4 4
ATOM    567  CA  MET  73     -5.799 15.944  50.521  1.000 18.75
ANISOU  567  CA  MET  73    2117      2326      2682     -538   -466 - 2 8 0
ATOM    568  CB  MET  73     -4.758 15.338  51.480  1.000 22.03
ANISOU  568  CB  MET  73    1826      2825      3718     -377   -306 5 9 5
ATOM    569  CG  MET  73     -5.374 15.059  52.843  1.000 27.01
ANISOU  569  CG  MET  73    3545      2853      3864      -84    -87  1 5 2 6
ATOM    570  SD  MET  73     -4.107 14.850  54.107  1.000 32.23
ANISOU  570  SD  MET  73    4364      4245      3637      469   -400 5 8 3
ATOM    571  CE  MET  73     -3.179 13.492  53.374  1.000 26.74
ANISOU  571  CE  MET  73    2885      4895      2381      326    425  1 3 4 8
ATOM    572  C   MET  73     -5.066 16.582  49.355  1.000 17.20
ANISOU  572  C   MET  73    1338      2129      3067      -20   -269 - 1 7 5
ATOM    573  O   MET  73     -3.945 17.110  49.498  1.000 21.20
ANISOU  573  O   MET  73    1713      2512      3832     -541     51 - 1 0 2 4
ATOM    574  N   ARG  74     -5.630 16.600  48.175  1.000 18.64
ANISOU  574  N   ARG  74    1881      2051      3150       84   -461   5 4 3
ATOM    575  CA  ARG  74     -5.091 17.180  46.967  1.000 15.73
ANISOU  575  CA  ARG  74    937 1986      3053      169     27 - 1 7 4
ATOM    576  CB  ARG  74     -5.655 16.537  45.704  1.000 16.53
ANISOU  576  CB  ARG  74    1711      1434      3137     -263    142  - 1 6 0
ATOM    577  CG  ARG  74     -4.911 16.934  44.440  1.000 15.01
ANISOU  577  CG  ARG  74    1270      1288      3144     -156    279  - 5 5 4
ATOM    578  CD  ARG  74     -5.683 16.543  43.185  1.000 16.10
ANISOU  578  CD  ARG  74    1967      1031      3120      268    -92  - 4 0 7
ATOM    579  NE  ARG  74     -4.902 16.816  41.966  1.000 18.81
ANISOU  579  NE  ARG  74    2259      1813      3075     -432   -252 - 2 9 6
ATOM    580  CZ  ARG  74     -5.033 17.824  41.130  1.000 16.64
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ANISOU  580   CZ   ARG   74    1968     1646     2709     -141   -190  -596
ATOM    581   NH1  ARG   74   -5.951   18.775   41.293   1.000 20.09
ANISOU  581   NH1  ARG   74    1899     2075     3660      54   -353  -788
ATOM    582   NH2  ARG   74   -4.220   17.896   40.068   1.000 20.12
ANISOU  582   NH2  ARG   74    2366     2844     2437     153   -196  -400
ATOM    583   C    ARG   74   -5.373   18.681   46.966   1.000 12.70
ANISOU  583   C    ARG   74    1187     1880     1758       6    -22  -136
ATOM    584   O    ARG   74   -4.501   19.465   46.582   1.000 14.07
ANISOU  584   O    ARG   74    1049     2048     2247    -221   -170  -480
ATOM    585   N    ARG   75   -6.567   19.099   47.387   1.000 12.72
ANISOU  585   N    ARG   75    1402     1702     1728      95    182  -108
ATOM    586   CA   ARG   75   -7.006   20.471   47.308   1.000 13.40
ANISOU  586   CA   ARG   75    1924     1618     1548      87    275  -193
ATOM    587   CB   ARG   75   -7.737   20.784   45.995   1.000 13.45
ANISOU  587   CB   ARG   75    1972     1387     1751    -179     51   -9
ATOM    588   CG   ARG   75   -6.908   20.637   44.721   1.000 13.38
ANISOU  588   CG   ARG   75    1638     1851     1594      78   -217  101
ATOM    589   CD   ARG   75   -5.849   21.708   44.582   1.000 12.85
ANISOU  589   CD   ARG   75    1537     1602     1741     237     62  -15
ATOM    590   NE   ARG   75   -5.087   21.685   43.347   1.000 13.71
ANISOU  590   NE   ARG   75    1708     1797     1705     188     90  -91
ATOM    591   CZ   ARG   75   -3.984   21.036   43.013   1.000 12.46
ANISOU  591   CZ   ARG   75    1348     1656     1731     -89     86  117
ATOM    592   NH1  ARG   75   -3.418   20.241   43.894   1.000 14.64
ANISOU  592   NH1  ARG   75    1933     1794     1834     186    -91   65
ATOM    593   NH2  ARG   75   -3.444   21.167   41.794   1.000 13.72
ANISOU  593   NH2  ARG   75    1510     2037     1667    -136     84  -83
ATOM    594   C    ARG   75   -7.948   20.787   48.475   1.000 12.74
ANISOU  594   C    ARG   75    1400     1656     1784    -209    214  -464
ATOM    595   O    ARG   75   -8.780   19.944   48.818   1.000 14.60
ANISOU  595   O    ARG   75    1348     1926     2273    -427    156  -480
ATOM    596   N    GLY   76   -7.830   21.955   49.078   1.000 11.92
ANISOU  596   N    GLY   76    1268     1537     1724     -22     34  -389
ATOM    597   CA   GLY   76   -8.801   22.395   50.070   1.000 12.44
ANISOU  597   CA   GLY   76    1439     1493     1796    -315    263  -412
ATOM    598   C    GLY   76   -8.536   21.857   51.469   1.000 12.50
ANISOU  598   C    GLY   76    1324     1527     1900       5    326  -273
ATOM    599   O    GLY   76   -7.388   21.517   51.769   1.000 14.25
ANISOU  599   O    GLY   76    1100     2099     2218    -277    239  -225
ATOM    600   N    PHE   77   -9.574   21.840   52.287   1.000 12.65
ANISOU  600   N    PHE   77    1191     1806     1809    -162    231  -351
ATOM    601   CA   PHE   77   -9.526   21.474   53.694   1.000 14.00
ANISOU  601   CA   PHE   77    1295     2110     1914    -260    276  -138
ATOM    602   CB   PHE   77  -10.644   22.226   54.451   1.000 14.73
ANISOU  602   CB   PHE   77    1554     2169     1874    -402    485  -317
ATOM    603   CG   PHE   77  -10.773   21.824   55.912   1.000 17.13
ANISOU  603   CG   PHE   77    1927     2730     1849    -374    378  -243
ATOM    604   CD1  PHE   77   -9.949   22.369   56.886   1.000 19.49
ANISOU  604   CD1  PHE   77    2744     2700     1962    -119    219  -789
ATOM    605   CD2  PHE   77  -11.730   20.902   56.309   1.000 19.13
ANISOU  605   CD2  PHE   77    2348     3068     1852    -501    864  -165
ATOM    606   CE1  PHE   77  -10.068   21.973   58.217   1.000 19.75
ANISOU  606   CE1  PHE   77    2956     2381     2168    -174   -313  -304
ATOM    607   CE2  PHE   77  -11.829   20.479   57.627   1.000 18.73
ANISOU  607   CE2  PHE   77    2565     2711     1841    -382    310   -77
ATOM    608   CZ   PHE   77  -10.986   21.013   58.584   1.000 19.22
ANISOU  608   CZ   PHE   77    2378     2542     2382      98     13  -364
ATOM    609   C    PHE   77   -9.668   19.976   53.924   1.000 13.73
ANISOU  609   C    PHE   77    1306     2096     1813    -368     21  -204
ATOM    610   O    PHE   77  -10.520   19.313   53.291   1.000 16.02
ANISOU  610   O    PHE   77    1386     2508     2194    -470   -128  -425
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ATOM    611   N    THR   78   -8.869   19.439   54.852   1.000  14.33
ANISOU  611   N    THR   78   1543     2270     1629     -472  35 - 49
ATOM    612   CA   THR   78   -9.034   18.053   55.276   1.000  15.80
ANISOU  612   CA   THR   78   1813     2310     1880     -508  -23  8 2
ATOM    613   CB   THR   78   -8.001   17.081   54.666   1.000  18.26
ANISOU  613   CB   THR   78   1583     2199     3158     -599  334  1 3 1
ATOM    614   OG1  THR   78   -7.924   17.323   53.266   1.000  21.81
ANISOU  614   OG1  THR   78   3351     1877     3057     -88   943 - 370
ATOM    615   CG2  THR   78   -8.419   15.634   54.888   1.000  20.35
ANISOU  615   CG2  THR   78   2855     2254     2622     -1119 1108 -7 0 7
ATOM    616   C    THR   78   -8.832   17.881   56.777   1.000  19.14
ANISOU  616   C    THR   78   2845     2479     1948     -1747 -471 1 6 9
ATOM    617   O    THR   78   -7.801   18.311   57.290   1.000  22.04
ANISOU  617   O    THR   78   2781     2889     2704     -1718 -985 7 6 3
ATOM    618   N    GLY   79   -9.730   17.203   57.484   1.000  19.20
ANISOU  618   N    GLY   79   2629     2823     1844     -1352 19 4 5
ATOM    619   CA   GLY   79   -9.429   16.695   58.819   1.000  16.69
ANISOU  619   CA   GLY   79   1800     2770     1771     -518  196 - 9 5
ATOM    620   C    GLY   79   -8.672   15.376   58.720   1.000  22.98
ANISOU  620   C    GLY   79   2381     2874     3477     -272  -289 - 5 4 5
ATOM    621   O    GLY   79   -9.227   14.504   58.044   1.000  25.57
ANISOU  621   O    GLY   79   3683     2520     3514     -456  -974 - 141
ATOM    622   N    LEU   80   -7.494   15.236   59.319   1.000  22.91
ANISOU  622   N    LEU   80   2412     2900     3392     30 -206  - 6 0 6
ATOM    623   CA   LEU   80   -6.644   14.081   59.072   1.000  25.08
ANISOU  623   CA   LEU   80   2848     2777     3904     206   621  3 6 1
ATOM    624   C    LEU   80   -6.372   13.294   60.370   1.000  24.30
ANISOU  624   C    LEU   80   2834     2762     3637     -300  480  2 0 0
ATOM    625   O    LEU   80   -5.729   13.812   61.291   1.000  25.14
ANISOU  625   O    LEU   80   2253     3017     4283     27 145 - 5
ATOM    626   CB   LEU   80   -5.318   14.480   58.415   1.000  27.16
ANISOU  626   CB   LEU   80   3057     3326     3937     379   918  6 4 1
ATOM    627   CG   LEU   80   -4.411   13.338   57.933   1.000  29.43
ANISOU  627   CG   LEU   80   3474     3505     4204     287   1260 1 7 3
ATOM    628   CD1  LEU   80   -5.145   12.438   56.956   1.000  38.31
ANISOU  628   CD1  LEU   80   5673     3891     4993     -1554 1987 - 2 8 7
ATOM    629   CD2  LEU   80   -3.137   13.884   57.306   1.000  29.85
ANISOU  629   CD2  LEU   80   3502     3919     3920     125   1307 - 2 6 4
ATOM    630   N    GLU   81   -6.853   12.055   60.396   1.000  25.58
ANISOU  630   N    GLU   81   2469     2759     4490     -196  -82  5 1 0
ATOM    631   CA   GLU   81   -6.739   11.038   61.415   1.000  25.98
ANISOU  631   CA   GLU   81   2739     2692     4441     -258  -55  4 2 4
ATOM    632   C    GLU   81   -5.299   10.536   61.562   1.000  26.28
ANISOU  632   C    GLU   81   2870     3268     3848     187   407  8 4 1
ATOM    633   O    GLU   81   -4.489   10.655   60.655   1.000  28.19
ANISOU  633   O    GLU   81   3709     3520     3483     253   799  - 5 4 4
ATOM    634   CB   GLU   81   -7.685   9.861    61.123   1.000  29.83
ANISOU  634   CB   GLU   81   3533     2894     4906     -770  270  1 8 1
ATOM    635   CG   GLU   81   -7.241   8.832    60.098   1.000  25.34
ANISOU  635   CG   GLU   81   1737     2915     4976     284   -1220 1 5 8
ATOM    636   CD   GLU   81   -7.568   9.156    58.649   1.000  27.00
ANISOU  636   CD   GLU   81   1841     3405     5012     475   -1887 - 4 5 6
ATOM    637   OE1  GLU   81   -8.120   10.240   58.324   1.000  28.81
ANISOU  637   OE1  GLU   81   3444     3091     4413     322   -155 7 9 1
ATOM    638   OE2  GLU   81   -7.240   8.273    57.814   1.000  31.31
ANISOU  638   OE2  GLU   81   3514     3384     4999     162   352  1 0 0
ATOM    639   N    SER   82   -4.988   9.974    62.720   1.000  31.00
ANISOU  639   N    SER   82   3568     3780     4430     -65   -30  1 4 8 4
ATOM    640   CA   SER   82   -3.653   9.422    62.959   1.000  30.29
ANISOU  640   CA   SER   82   3692     3278     4540     -157  -515 1 0 1 1
ATOM    641   C    SER   82   -3.421   8.150    62.150   1.000  31.76
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ANISOU  641   C    SER  82   3995      3241      4831      -102  -1104  847
ATOM    642   O    SER  82   -4.313    7.728    61.397   1.000 34.01
ANISOU  642   O    SER  82   3193      3794      5935       458  -1188  1 3 4
ATOM    643   CB   SER  82   -3.463    9.167    64.452   1.000 34.74
ANISOU  643   CB   SER  82   4687      3907      4606      -232   -979  971
ATOM    644   OG   SER  82   -2.360    8.305    64.681   1.000 41.53
ANISOU  644   OG   SER  82   4922      5366      5490       236  -1958  970
ATOM    645   N    GLY  91   -17.230   9.498    70.136   1.000 42.64
ANISOU  645   N    GLY  91   4516      7599      4086     -2166   2340 - 4 2 7
ATOM    646   CA   GLY  91   -17.485  10.892    69.789   1.000 44.91
ANISOU  646   CA   GLY  91   6666      7702      2697     -4311  -1561  5 6 5
ATOM    647   C    GLY  91   -16.227  11.662    69.452   1.000 38.67
ANISOU  647   C    GLY  91   5455      7587      1652     -2821   -274 - 1 5 9
ATOM    648   O    GLY  91   -15.164  11.480    70.040   1.000 32.45
ANISOU  648   O    GLY  91   4241      4474      3616      -183   1152 - 4 3 9
ATOM    649   N    GLY  92   -16.332  12.558    68.474   1.000 31.97
ANISOU  649   N    GLY  92   3881      5904      2363     -1382    735  - 5 7 1
ATOM    650   CA   GLY  92   -15.232  13.412    68.075   1.000 33.02
ANISOU  650   CA   GLY  92   4121      6150      2274     -1716    851  - 9 5 6
ATOM    651   C    GLY  92   -15.223  13.696    66.572   1.000 26.22
ANISOU  651   C    GLY  92   2603      5046      2314      -885    741  - 9 4 7
ATOM    652   O    GLY  92   -16.289  13.666    65.939   1.000 23.91
ANISOU  652   O    GLY  92   2490      3396      3198      -680    548  - 5 6 7
ATOM    653   N    SER  93   -14.010  13.956    66.088   1.000 23.77
ANISOU  653   N    SER  93   2405      3917      2708      -372    736  - 5 6 0
ATOM    654   CA   SER  93   -13.801  14.287    64.690   1.000 23.41
ANISOU  654   CA   SER  93   2700      3292      2901      -386    970  - 3 9 9
ATOM    655   C    SER  93   -12.410  13.852    64.240   1.000 24.26
ANISOU  655   C    SER  93   2547      3908      2763      -286    833  - 2 2 4
ATOM    656   O    SER  93   -11.497  13.831    65.089   1.000 27.06
ANISOU  656   O    SER  93   3401      3536      3346       630     92 - 3 8 6
ATOM    657   CB   SER  93   -13.966  15.795    64.467   1.000 25.71
ANISOU  657   CB   SER  93   2811      3225      3735      -576    271  - 5 0 6
ATOM    658   OG   SER  93   -13.558  16.158    63.150   1.000 28.14
ANISOU  658   OG   SER  93   2694      3713      4284      -373    290   5 1 7
ATOM    659   N    TYR  94   -12.254  13.533    62.949   1.000 24.24
ANISOU  659   N    TYR  94   2786      3320      3104      -204    791  - 8 1 7
ATOM    660   CA   TYR  94   -10.878  13.262    62.498   1.000 23.94
ANISOU  660   CA   TYR  94   3089      2502      3505        95   1112  - 6 8 3
ATOM    661   C    TYR  94   -10.017  14.531    62.584   1.000 25.19
ANISOU  661   C    TYR  94   2601      2657      4312       147    737  - 6 2 5
ATOM    662   O    TYR  94   -8.786   14.421    62.694   1.000 30.11
ANISOU  662   O    TYR  94   2617      3095      5726       307    760   3  6
ATOM    663   CB   TYR  94   -10.800  12.659    61.098   1.000 25.64
ANISOU  663   CB   TYR  94   3566      2910      3267      -293   1331 - 5 2 5
ATOM    664   CG   TYR  94   -11.600  11.410    60.876   1.000 23.22
ANISOU  664   CG   TYR  94   3359      2768      2697       -69    784  - 2 7 4
ATOM    665   CD1  TYR  94   -12.451  11.455    59.777   1.000 26.01
ANISOU  665   CD1  TYR  94   4410      2730      2741       499    353  - 5 4 3
ATOM    666   CD2  TYR  94   -11.564  10.252    61.635   1.000 24.42
ANISOU  666   CD2  TYR  94   3117      2866      3297        73    458 - 1 4
ATOM    667   CE1  TYR  94   -13.243  10.407    59.443   1.000 28.75
ANISOU  667   CE1  TYR  94   4559      3328      3037       434    140  - 1 3 7 0
ATOM    668   CE2  TYR  94   -12.375   9.159    61.305   1.000 26.47
ANISOU  668   CE2  TYR  94   4707      2585      2764      -220   1227 - 7 1 8
ATOM    669   CZ   TYR  94   -13.209   9.247    60.212   1.000 29.70
ANISOU  669   CZ   TYR  94   5641      3518      2125     -1172   1103 - 1 4 4 7
ATOM    670   OH   TYR  94   -14.059   8.281    59.730   1.000 34.02
ANISOU  670   OH   TYR  94   3079      3962      5886      -423   1593 - 2 6 3 8
ATOM    671   N    SER  95   -10.628  15.714    62.561   1.000 22.61
ANISOU  671   N    SER  95   2460      2497      3632       -54     59 - 3 3 8
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ATOM    672  CA  SER  95   -9.924 16.975 62.750 1.000 22.54
ANISOU  672  CA  SER  95   2257    2603   3706  -120  -301 4  6
ATOM    673  C   SER  95   -9.370 17.106 64.163 1.000 23.58
ANISOU  673  C   SER  95   1811    3478   3671  -521  -88  - 85
ATOM    674  O   SER  95   -8.623 18.034 64.481 1.000 26.53
ANISOU  674  O   SER  95   2592    3242   4247  -469  -167 -6 4 1
ATOM    675  CB  SER  95  -10.838 18.177 62.478 1.000 27.58
ANISOU  675  CB  SER  95   3657    2556   4264  365   -379 2  8
ATOM    676  OG  SER  95  -11.506 18.093 61.242 1.000 39.40
ANISOU  676  OG  SER  95   6336    4214   4421  900   -1445 1 4 4 2
ATOM    677  N   ASP  96   -9.712 16.194 65.060 1.000 25.04
ANISOU  677  N   ASP  96   2579    3688   3248  -399  277  - 2 3 2
ATOM    678  CA  ASP  96   -9.228 16.317 66.422 1.000 24.42
ANISOU  678  CA  ASP  96   2603    3347   3330  -470  257  - 5 2 6
ATOM    679  C   ASP  96   -7.735 16.050 66.501 1.000 24.45
ANISOU  679  C   ASP  96   2597    3228   3466  -471  162  - 3 8 3
ATOM    680  O   ASP  96   -7.073 16.589 67.404 1.000 26.51
ANISCU  680  O   ASP  96   2656    4047   3370  -170  160  - 7 9 8
ATOM    681  CB  ASP  96   -9.952 15.334 67.334 1.000 24.97
ANISOU  681  CB  ASP  96   2310    3806   3371  -423  -228 7  7
ATOM    682  CG  ASP  96  -11.411 15.605 67.606 1.000 26.77
ANISOU  682  CG  ASP  96   2272    4334   3566  -362  -240 7 1 6
ATOM    683  OD1 ASP  96  -11.935 16.723 67.388 1.000 33.94
ANISOU  683  OD1 ASP  96   3267    4894   4733  647   204  5 6 9
ATOM    684  OD2 ASP  96  -12.058 14.646 68.083 1.000 32.65
ANISOU  684  OD2 ASP  96   3624    4709   4072  -1032 1446 - 2 0 2
ATOM    685  N   TYR  97   -7.254 15.226 65.581 1.000 22.21
ANISOU  685  N   TYR  97   2292    3389   2760  -376  -77  - 1 0 2
ATOM    686  CA  TYR  97   -5.835 14.852 65.583 1.000 23.71
ANISOU  686  CA  TYR  97   2480    3542   2987  -27   106  6 4 4
ATOM    687  C   TYR  97   -5.026 15.828 64.743 1.000 23.06
ANISOU  687  C   TYR  97   2363    3754   2647  -410  -78  3 5 0
ATOM    688  O   TYR  97   -3.992 16.327 65.230 1.000 24.29
ANISOU  688  O   TYR  97   2205    3845   3178  -133  -230 7  4
ATOM    689  CB  TYR  97   -5.585 13.451 65.035 1.000 28.38
ANISOU  689  CB  TYR  97   3230    3324   4229  540   -450 8 3 2
ATOM    690  CG  TYR  97   -4.132 13.025 65.082 1.000 30.37
ANISOU  690  CG  TYR  97   3278    4101   4161  766   -191 6 7 1
ATOM    691  CD1 TYR  97   -3.511 12.691 66.285 1.000 30.19
ANISOU  691  CD1 TYR  97   2878    4475   4119  1106  151  9 5 1
ATOM    692  CD2 TYR  97   -3.370 12.945 63.922 1.000 29.79
ANISOU  692  CD2 TYR  97   3317    4005   3997  53 -253  5 4 4
ATOM    693  CE1 TYR  97   -2.178 12.294 66.324 1.000 32.77
ANISOU  693  CE1 TYR  97   2554    4771   5126  574   -68  7 6 3
ATOM    694  CE2 TYR  97   -2.043 12.553 63.955 1.000 32.68
ANISOU  694  CE2 TYR  97   3536    3793   5087  403   353  3 2 3
ATOM    695  CZ  TYR  97   -1.445 12.228 65.157 1.000 33.00
ANISOU  695  CZ  TYR  97   2633    4284   5622  1066  264  4 5 6
ATOM    696  OH  TYR  97   -0.121 11.845 65.156 1.000 42.66
ANISOU  696  OH  TYR  97   2572    5373   8264  1161  764  1 2 7 7
ATOM    697  CB  SER  98   -3.465 16.575 62.134 1.000 23.20
ANISOU  697  CB  SER  98   2461    2766   3587  105   2    - 5 4 4
ATOM    698  OG  SER  98   -3.632 15.649 61.078 1.000 26.49
ANISOU  698  OG  SER  98   3824    3059   3180  -154  238  - 4 5 7
ATOM    699  C   SER  98   -5.694 17.744 61.701 1.000 18.66
ANISOU  699  C   SER  98   2301    2150   2637  -295  66 1 3
ATOM    700  O   SER  98   -6.768 17.212 61.413 1.000 20.88
ANISOU  700  O   SER  98   3042    2245   2646  -945  -249 1 8 1
ATOM    701  N   SER  98   -5.457 16.110 63.511 1.000 23.62
ANISOU  701  N   SER  98   2816    3227   2931  -441  -395 6 0 5
ATOM    702  CA  SER  98   -4.748 17.143 62.741 1.000 21.31
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ANISOU  702  CA  SER  98  2430    2687    2982    133    153  2 9 4
ATOM    703  N   MET  99  -5.307  18.891  61.148  1.000 18.68
ANISOU  703  N   MET  99  2392    2722    1984   -978   -366 1 0 1
ATOM    704  CA  MET  99  -6.047  19.560  60.075  1.000 17.84
ANISOU  704  CA  MET  99  2431    2620    1726   -945   -212 - 1 7
ATOM    705  CB  MET  99  -6.819  20.779  60.585  1.000 19.71
ANISOU  705  CB  MET  99  2348    2968    2173   -679    25 6 4
ATOM    706  CG  MET  99  -8.052  20.392  61.374  1.000 23.68
ANISOU  706  CG  MET  99  2360    3055    3582   -504    393  4 8 9
ATOM    707  SD  MET  99  -9.031  21.821  61.911  1.000 22.33
ANISOU  707  SD  MET  99  2569    3383    2534   -522    170  - 1 2 0
ATOM    708  CE  MET  99  -8.148  22.225  63.419  1.000 36.98
ANISOU  708  CE  MET  99  6485    4165    3401   -225  -1904  - 2 3
ATOM    709  C   MET  99  -5.070  19.954  58.973  1.000 17.19
ANISOU  709  C   MET  99  2269    2488    1776   -960   -194 - 2 0 1
ATOM    710  O   MET  99  -3.964  20.341  59.324  1.000 16.93
ANISOU  710  O   MET  99  1932    2583    1919   -367   -208 - 2 4 1
ATOM    711  N   CYS  100 -5.486  19.864  57.715  1.000 20.00
ANISOU  711  N   CYS  100 3178    2683    1739  -1753   -358 1 6 6
ATOM    712  CA  CYS  100 -4.645  20.181  56.554  1.000 16.64
ANISOU  712  CA  CYS  100 2213    2294    1817   -924   -563 4 6 8
ATOM    713  CB  CYS  100 -4.291  18.893  55.813  1.000 17.74
ANISOU  713  CB  CYS  100 2161    2174    2407    560   -765 1 0 5 3
ATOM    714  SG  CYS  100 -3.035  18.928  54.552  1.000 33.56
ANISOU  714  SG  CYS  100 5244    3511    3997    414   1509 6 0 1
ATOM    715  C   CYS  100 -5.347  21.121  55.590  1.000 13.48
ANISOU  715  C   CYS  100 1879    1415    1829    -68    240  - 9 1
ATOM    716  O   CYS  100 -6.585  21.127  55.496  1.000 14.49
ANISOU  716  O   CYS  100 1880    1952    1673   -497    -57  1 4
ATOM    717  N   TYR  101 -4.589  21.921  54.852  1.000 13.35
ANISOU  717  N   TYR  101 1721    1677    1673   -254    -78  4 9
ATOM    718  CA  TYR  101 -5.016  22.753  53.755  1.000 10.27
ANISOU  718  CA  TYR  101 926 1498     1477    -15   -141  - 2 3 1
ATOM    719  CB  TYR  101 -5.102  24.265  54.124  1.000 13.60
ANISOU  719  CB  TYR  101 1626    1513    2027    -48    322  - 2 3 6
ATOM    720  CG  TYR  101 -5.498  25.025  52.863  1.000 17.31
ANISOU  720  CG  TYR  101 2373    1509    2694   -158   -103 1 9 3
ATOM    721  CD1 TYR  101 -6.815  25.068  52.519  1.000 16.38
ANISOU  721  CD1 TYR  101 2464     752 3006    190   -227  5 5
ATOM    722  CE1 TYR  101 -7.307  25.715  51.412  1.000 17.01
ANISOU  722  CE1 TYR  101 2755     714 2993    -86   -416  1 2 2
ATOM    723  CD2 TYR  101 -4.616  25.679  52.012  1.000 19.51
ANISOU  723  CD2 TYR  101 3032    1533    2847  -1143  -594 4 7 5
ATOM    724  CE2 TYR  101 -5.065  26.321  50.872  1.000 20.96
ANISOU  724  CE2 TYR  101 2802    1949    3211    238    112  7 6 9
ATOM    725  CZ  TYR  101 -6.414  26.334  50.568  1.000 22.78
ANISOU  725  CZ  TYR  101 3238    2291    3126  -1228  -919 6 2 4
ATOM    726  OH  TYR  101 -6.875  26.986  49.442  1.000 23.10
ANISOU  726  OH  TYR  101 3141    3112    2522    -14   -129 4 2 9
ATOM    727  C   TYR  101 -4.041  22.518  52.596  1.000 11.25
ANISOU  727  C   TYR  101 1223    1398    1654   -323    103  - 2 5 2
ATOM    728  O   TYR  101 -2.823  22.677  52.787  1.000 12.23
ANISOU  728  O   TYR  101 1114    1750    1784    -87    130  - 2 0
ATOM    729  N   SER  102 -4.542  22.190  51.405  1.000 11.17
ANISOU  729  N   SER  102 1355    1279    1611   -220    145  - 2 6 3
ATOM    730  CA  SER  102 -3.752  21.802  50.235  1.000 10.46
ANISOU  730  CA  SER  102 1144    1263    1568     62   -1 - 1 2 5
ATOM    731  CB  SER  102 -4.027  20.343  49.908  1.000 13.46
ANISOU  731  CB  SER  102 1668    1212    2234    324    105  - 3 0 1
ATOM    732  OG  SER  102 -3.723  19.487  51.025  1.000 16.42
ANISOU  732  OG  SER  102 2291    1313    2637   -122    -43  9 6
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ATOM    733  C   SER 102  -4.046  22.668  49.008  1.000 11.74
ANISOU  733  C   SER 102  1346    1500    1614    18 -39 - 1 0
ATOM    734  O   SER 102  -5.148  23.148  48.784  1.000 12.84
ANISOU  734  O   SER 102  1480    1410    1988    90 -66 249
ATOM    735  N   MET 103  -3.004  22.871  48.187  1.000 12.33
ANISOU  735  N   MET 103  1554    1722    1409   -262  -10  - 2 4 6
ATOM    736  CA  MET 103  -3.188  23.603  46.938  1.000 12.92
ANISOU  736  CA  MET 103  1663    1681    1565    22 47 - 7 0
ATOM    737  CB  MET 103  -3.215  25.122  47.179  1.000 17.51
ANISOU  737  CB  MET 103  2439    1634    2579   -363  812   - 4 4
ATOM    738  CG  MET 103  -1.929  25.808  47.549  1.000 20.07
ANISOU  738  CG  MET 103  2509    1470    3646   -538  688  376
ATOM    739  SD  MET 103  -2.136  27.614  47.689  1.000 18.10
ANISOU  739  SD  MET 103  2235    1665    2975   -3 -334   - 352
ATOM    740  CE  MET 103  -2.365  28.068  45.991  1.000 18.09
ANISOU  740  CE  MET 103  2319    1457    3098   -187  -718  - 2 1 4
ATOM    741  C   MET 103  -2.152  23.221  45.892  1.000 12.57
ANISOU  741  C   MET 103  1420    1837    1519    119  -53  2 3 8
ATOM    742  O   MET 103  -1.120  22.573  46.175  1.000 12.57
ANISOU  742  O   MET 103  1094    1891    1792   -155  -165 276
ATOM    743  N   GLY 104  -2.418  23.650  44.655  1.000 12.83
ANISOU  743  N   GLY 104  1493    1958    1422    237  -124 - 3 4
ATOM    744  CA  GLY 104  -1.533  23.459  43.513  1.000 12.65
ANISOU  744  CA  GLY 104  1075    2188    1544   -93   -37  2 4 2
ATOM    745  C   GLY 104  -1.624  24.622  42.542  1.000 14.36
ANISOU  745  C   GLY 104  1909    1985    1561   -265  -294 1 4 2
ATOM    746  O   GLY 104  -2.033  25.700  42.967  1.000 15.69
ANISOU  746  O   GLY 104  1628    2273    2060    163  -197 2 1 3
ATOM    747  N   THR 105  -1.242  24.397  41.276  1.000 14.52
ANISOU  747  N   THR 105  1829    2182    1504   -59   -375 3 1 9
ATOM    748  CA  THR 105  -1.218  25.452  40.279  1.000 15.27
ANISOU  748  CA  THR 105  1977    2223    1603   -105  -363 3 6 5
ATOM    749  CB  THR 105  -0.359  25.083  39.039  1.000 15.61
ANISOU  749  CB  THR 105  1936    2122    1873   -37   -106 5 5 4
ATOM    750  OG1 THR 105  -0.884  23.876  38.446  1.000 16.16
ANISOU  750  OG1 THR 105  1738    2260    2140    217  -285 1 5 1
ATOM    751  CG2 THR 105  1.092   24.882  39.369  1.000 17.47
ANISOU  751  CG2 THR 105  1918    2871    1847   -293  -227 5 2 7
ATOM    752  C   THR 105  -2.603  25.828  39.755  1.000 14.73
ANISOU  752  C   THR 105  1989    1694    1913    122  -340 1 9 9
ATOM    753  O   THR 105  -2.730  26.921  39.174  1.000 19.91
ANISOU  753  O   THR 105  2579    2355    2632    23 -437  1 0 0 4
ATOM    754  N   ALA 106  -3.587  24.960  39.913  1.000 16.57
ANISOU  754  N   ALA 106  1836    2413    2047    2  -260  6 6 1
ATOM    755  CA  ALA 106  -4.975  25.167  39.465  1.000 14.94
ANISOU  755  CA  ALA 106  1975    1904    1798    105   -456 3 6 5
ATOM    756  CB  ALA 106  -5.054  24.945  37.965  1.000 17.75
ANISOU  756  CB  ALA 106  2006    2862    1876    140   -201 - 3 2
ATOM    757  C   ALA 106  -5.942  24.251  40.222  1.000 16.26
ANISOU  757  C   ALA 106  1710    2174    2293    327   -127 4 9 1
ATOM    758  O   ALA 106  -5.498  23.398  41.013  1.000 14.57
ANISOU  758  O   ALA 106  1622    1971    1945    213   -21  3 3 7
ATOM    759  N   ASP 107  -7.253  24.410  40.008  1.000 16.71
ANISOU  759  N   ASP 107  1768    2096    2485    540   -22  3 0 4
ATOM    760  CA  ASP 107  -8.310  23.638  40.633  1.000 16.10
ANISOU  760  CA  ASP 107  1696    2175    2246    51 -485  - 1 4
ATOM    761  CB  ASP 107  -8.231  22.171  40.211  1.000 17.09
ANISOU  761  CB  ASP 107  1299    2385    2808    144   -203 - 3 9 9
ATOM    762  CG  ASP 107  -8.418  21.966  38.720  1.000 21.54
ANISOU  762  CG  ASP 107  2385    2894    2906    84 -317   - 7 2 2
ATOM    763  OD1 ASP 107  -9.452  22.445  38.189  1.000 23.92
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ANISOU  763  OD1 ASP  107 3447   2970   2672    698   -753 - 772
ATOM    764  OD2 ASP  107 -7.563 21.311 38.080 1.000 24.88
ANISOU  764  OD2 ASP  107 2496   4004   2954    105    244 - 679
ATOM    765  C   ASP  107 -8.285 23.785 42.160 1.000 14.16
ANISOU  765  C   ASP  107 1261   1918   2201    237   -447 1 5 3
ATOM    766  O   ASP  107 -8.507 22.850 42.936 1.000 16.67
ANISOU  766  O   ASP  107 2017   1927   2390   -189   -193 9 7
ATOM    767  N   ASN  108 -8.027 25.020 42.598 1.000 15.34
ANISOU  767  N   ASN  108 2093   1866   1870    82 51 2 3 9
ATOM    768  CA  ASN  108 -7.967 25.314 44.031 1.000 13.68
ANISOU  768  CA  ASN  108 1479   1823   1898    153    107 2 5 7
ATOM    769  CB  ASN  108 -6.925 26.420 44.272 1.000 15.60
ANISOU  769  CB  ASN  108 1593   2026   2309   16 267 - 9 8
ATOM    770  CG  ASN  108 -5.516 25.942 43.963 1.000 15.23
ANISOU  770  CG  ASN  108 1505   2141   2142    5   -53 2
ATOM    771  OD1 ASN  108 -5.086 24.932 44.505 1.000 15.40
ANISOU  771  OD1 ASN  108 1412   2442   1998   -5 -239  1 8 8
ATOM    772  ND2 ASN  108 -4.823 26.678 43.094 1.000 16.96
ANISOU  772  ND2 ASN  108 1593   2198   2652    339    393 2 2 2
ATOM    773  C   ASN  108 -9.310 25.708 44.642 1.000 14.55
ANISOU  773  C   ASN  108 1471   1937   2120    261    191 5 2 6
ATOM    774  O   ASN  108 -10.222 26.170 43.958 1.000 16.89
ANISOU  774  O   ASN  108 1861   2336   2219    716   -109 1 4
ATOM    775  N   LEU  109 -9.412 25.512 45.954 1.000 13.42
ANISOU  775  N   LEU  109 1458   1648   1994    179    130  9
ATOM    776  CA  LEU  109 -10.602 25.796 46.769 1.000 13.53
ANISOU  776  CA  LEU  109 1094   2122   1923   -52    -86 - 2 5 6
ATOM    777  CB  LEU  109 -11.187 24.499 47.331 1.000 14.50
ANISOU  777  CB  LEU  109 1382   1959   2169    119    455 - 4 6 8
ATOM    778  CG  LEU  109 -11.580 23.383 46.370 1.000 15.21
ANISOU  778  CG  LEU  109 1593   1785   2403    235   63 - 3 4 2
ATOM    779  CD1 LEU  109 -11.931 22.083 47.089 1.000 18.26
ANISOU  779  CD1 LEU  109 2460   1674   2806    382   -414 - 9 4
ATOM    780  CD2 LEU  109 -12.780 23.783 45.529 1.000 22.36
ANISOU  780  CD2 LEU  109 3055   2391   3052   44 -1155 2 8 8
ATOM    781  C   LEU  109 -10.203 26.794 47.840 1.000 13.54
ANISOU  781  C   LEU  109 1179   1989   1979   76 -116  - 2 5 9
ATOM    782  O   LEU  109 -9.416 26.428 48.717 1.000 16.15
ANISOU  782  O   LEU  109 2196   2210   1730   -52   -366 3 2
ATOM    783  N   PHE  110 -10.706 28.025 47.786 1.000 16.11
ANISOU  783  N   PHE  110 1369   2042   2709    105   -118 - 2 8 8
ATOM    784  CA  PHE  110 -10.298 29.079 48.732 1.000 17.05
ANISOU  784  CA  PHE  110 1626   1801   3050   -116    259  - 3 6 2
ATOM    785  CB  PHE  110 -9.660 30.259 47.991 1.000 17.94
ANISOU  785  CB  PHE  110 1423   2366   3027   -290    228 - 1 2 9
ATOM    786  CG  PHE  110 -8.425 29.972 47.165 1.000 20.32
ANISOU  786  CG  PHE  110 1702   2650   3368   -176    459 - 3 8 5
ATOM    787  CD1 PHE  110 -7.257 29.598 47.793 1.000 20.35
ANISOU  787  CD1 PHE  110 1885   2462   3387    461    573 - 7 0 7
ATOM    788  CD2 PHE  110 -8.405 30.110 45.789 1.000 20.31
ANISOU  788  CD2 PHE  110 2073   2226   3419    512    712 - 2 6 4
ATOM    789  CE1 PHE  110 -6.102 29.347 47.065 1.000 19.49
ANISOU  789  CE1 PHE  110 1958   2116   3332    176    749 - 6 3 1
ATOM    790  CE2 PHE  110 -7.288 29.846 45.050 1.000 20.65
ANISOU  790  CE2 PHE  110 2158   2094   3596    758    724 - 3 2 1
ATOM    791  CZ  PHE  110 -6.118 29.496 45.694 1.000 19.43
ANISOU  791  CZ  PHE  110 1925   2131   3327    219    542 - 7 8 0
ATOM    792  C   PHE  110 -11.495 29.556 49.538 1.000 17.08
ANISOU  792  C   PHE  110 1774   1806   2911   -74    414 - 1 1 1
ATOM    793  O   PHE  110 -12.562 29.792 48.929 1.000 21.26
ANISOU  793  O   PHE  110 1849   2577   3650    405    178 - 4 4 8
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ATOM    794  N   PRO  111  -11.406  29.717  50.851  1.000  19.41
ANISOU  794  N   PRO  111  2279  2110  2985  -386   519  -314
ATOM    795  CD  PRO  111  -10.278  29.322  51.705  1.000  19.20
ANISOU  795  CD  PRO  111  2773  1880  2640  -417   255  -514
ATOM    796  CA  PRO  111  -12.549  30.252  51.604  1.000  21.47
ANISOU  796  CA  PRO  111  3026  1924  3206   -50   728  -635
ATOM    797  CB  PRO  111  -12.167  30.007  53.055  1.000  23.63
ANISOU  797  CB  PRO  111  3789  2054  3137   334   776  -575
ATOM    798  CG  PRO  111  -10.775  29.535  53.100  1.000  22.33
ANISOU  798  CG  PRO  111  2767  2908  2809  -1006   623  -414
ATOM    799  C   PRO  111  -12.828  31.739  51.433  1.000  23.88
ANISOU  799  C   PRO  111  3139  2049  3887    79  -142  -479
ATOM    800  O   PRO  111  -13.919  32.194  51.834  1.000  26.77
ANISOU  800  O   PRO  111  3800  2818  3555   992   -91  -397
ATOM    801  N   SER  112  -11.906  32.517  50.872  1.000  25.19
ANISOU  801  N   SER  112  3514  2269  3788  -247  -856  282
ATOM    802  CA  SER  112  -12.300  33.919  50.631  1.000  26.43
ANISOU  802  CA  SER  112  2654  2655  4734   496  1364  456
ATOM    803  CB  SER  112  -12.506  34.712  51.912  1.000  33.37
ANISOU  803  CB  SER  112  3122  3663  5895   172  2582  -510
ATOM    804  OG  SER  112  -11.322  34.719  52.688  1.000  36.94
ANISOU  804  OG  SER  112  6530  2154  5351  1399   206  -415
ATOM    805  C   SER  112  -11.262  34.587  49.723  1.000  26.62
ANISOU  805  C   SER  112  2613  2546  4956  1021  1668  651
ATOM    806  O   SER  112  -10.219  34.029  49.414  1.000  22.81
ANISOU  806  O   SER  112  2241  2782  3645   800   837  -400
ATOM    807  N   GLY  113  -11.570  35.802  49.279  1.000  28.93
ANISOU  807  N   GLY  113  2937  2947  5108  1008  1175  1198
ATOM    808  CA  GLY  113  -10.659  36.478  48.365  1.000  30.79
ANISOU  808  CA  GLY  113  2992  3606  5102   381   798  1400
ATOM    809  C   GLY  113  -9.362  36.829  49.070  1.000  31.83
ANISOU  809  C   GLY  113  3297  3919  4878   262   897  528
ATOM    810  O   GLY  113  -8.294  36.790  48.459  1.000  25.85
ANISOU  810  O   GLY  113  2920  2317  4585   857   450  -203
ATOM    811  N   ASP  114  -9.479  37.145  50.365  1.000  29.56
ANISOU  811  N   ASP  114  3487  2877  4868   866  1104  760
ATOM    812  CA  ASP  114  -8.257  37.463  51.122  1.000  26.15
ANISOU  812  CA  ASP  114  3189  2680  4066  1028  1584  542
ATOM    813  CB  ASP  114  -8.628  37.937  52.526  1.000  33.81
ANISOU  813  CB  ASP  114  5580  2697  4569  1774  1691  -240
ATOM    814  CG  ASP  114  -7.904  39.232  52.840  1.000  40.77
ANISOU  814  CG  ASP  114  6798  3734  4960   719   693  -248
ATOM    815  OD1 ASP  114  -8.330  40.277  52.295  1.000  48.61
ANISOU  815  OD1 ASP  114  6014  2534  9920  1703   931  -913
ATOM    816  OD2 ASP  114  -6.932  39.178  53.622  1.000  54.35
ANISOU  816  OD2 ASP  114  5258  7609  7783  -868   495  1602
ATOM    817  C   ASP  114  -7.310  36.281  51.231  1.000  23.05
ANISOU  817  C   ASP  114  2621  2102  4033   444  1874  340
ATOM    818  O   ASP  114  -6.111  36.371  50.955  1.000  22.05
ANISOU  818  O   ASP  114  2423  2277  3677   131  1411  -461
ATOM    819  N   PHE  115  -7.854  35.160  51.637  1.000  23.21
ANISOU  819  N   PHE  115  2945  1890  3984  -130  1293  -228
ATOM    820  CA  PHE  115  -7.120  33.896  51.690  1.000  19.93
ANISOU  820  CA  PHE  115  2562  1908  3102  -198   655  -294
ATOM    821  CB  PHE  115  -8.085  32.792  52.157  1.000  19.49
ANISOU  821  CB  PHE  115  2378  1754  3275    64   881  -314
ATOM    822  CG  PHE  115  -7.523  31.445  52.540  1.000  17.25
ANISOU  822  CG  PHE  115  2053  1589  2912   -56   348  -695
ATOM    823  CD1 PHE  115  -7.637  30.951  53.833  1.000  19.00
ANISOU  823  CD1 PHE  115  2728  1539  2950    73   496  -683
ATOM    824  CD2 PHE  115  -6.868  30.634  51.615  1.000  17.88
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ANISOU 824  CD2 PHE  115 1933     1931     2927     7  298 - 8 1 0
ATOM    825  CE1 PHE  115  -7.100  29.711  54.163  1.000 2 0 . 2 5
ANISOU 825  CE1 PHE  115 2825     1825     3042     317  341  - 5 7 5
ATOM    826  CE2 PHE  115  -6.338  29.412  51.955  1.000 19.11
ANISOU 826  CE2 PHE  115 1865     2158     3237     336  351  - 8 8 5
ATOM    827  CZ  PHE  115  -6.452  28.936  53.233  1.000 19.39
ANISOU 827  CZ  PHE  115 2068     1910     3390     320  248  - 6 6 9
ATOM    828  C   PHE  115  -6.506  33.624  50.327  1.000 17.86
ANISOU 828  C   PHE  115 1964     1945     2878     61 344 1 6
ATOM    829  O   PHE  115  -5.324  33.315  50.271  1.000 17.34
ANISOU 829  O   PHE  115 1868     2107     2613     -132  179  1 5 7
ATOM    830  N   GLU  116  -7.310  33.683  49.263  1.000 18.21
ANISOU 830  N   GLU  116 1921     1934     3065     547  281  6 2
ATOM    831  CA  GLU  116  -6.848  33.387  47.907  1.000 19.99
ANISOU 831  CA  GLU  116 2128     2618     2851     81 231 2 2 2
ATOM    832  CB  GLU  116  -7.968  33.605  46.884  1.000 18.61
ANISOU 832  CB  GLU  116 2058     1952     3060     231  244  2 7 0
ATOM    833  CG  GLU  116  -7.398  33.378  45.482  1.000 18.61
ANISOU 833  CG  GLU  116 1813     2288     2971     295  -32  - 3 3
ATOM    834  CD  GLU  116  -8.442  33.230  44.412  1.000 22.40
ANISOU 834  CD  GLU  116 1908     3193     3410     -122  -278 - 9 1
ATOM    835  OE1 GLU  116  -9.654  33.272  44.678  1.000 30.82
ANISOU 835  OE1 GLU  116 1793     4465     5452     273  -414 - 2 4
ATOM    836  OE2 GLU  116  -8.085  33.063  43.225  1.000 30.24
ANISOU 836  OE2 GLU  116 3333     5132     3026     382  -658 3 2 7
ATOM    837  C   GLU  116  -5.620  34.211  47.535  1.000 18.82
ANISOU 837  C   GLU  116 2090     2069     2990     294  119  4 8 7
ATOM    838  O   GLU  116  -4.605  33.701  47.049  1.000 17.41
ANISOU 838  O   GLU  116 2228     1780     2606     45 259 2 8 2
ATOM    839  N   ARG  117  -5.660  35.508  47.777  1.000 21.02
ANISOU 839  N   ARG  117 2313     2185     3487     408  220  9 0
ATOM    840  CA  ARG  117  -4.560  36.420  47.431  1.000 21.35
ANISOU 840  CA  ARG  117 2337     1800     3976     466  147  - 3 1
ATOM    841  C   ARG  117  -3.291  36.054  48.192  1.000 20.52
ANISOU 841  C   ARG  117 2292     2124     3380     353  288  - 1 0
ATOM    842  O   ARG  117  -2.186  35.969  47.636  1.000 18.96
ANISOU 842  O   ARG  117 2223     1664     3316     138  318  2 3 1
ATOM    843  CB  ARG  117  -4.971  37.885  47.693  1.000 25.59
ANISOU 843  CB  ARG  117 3237     1900     4587     929  1882 6 3 2
ATOM    844  CG  ARG  117  -3.881  38.908  47.478  1.000 32.57
ANISOU 844  CG  ARG  117 5212     1925     5237     -281  1083 6 2 3
ATOM    845  CD  ARG  117  -4.325  40.323  47.859  1.000 36.56
ANISOU 845  CD  ARG  117 6009     2157     5724     149  1774 6 6 3
ATOM    846  NE  ARG  117  -5.162  40.335  49.056  1.000 44.43
ANISOU 846  NE  ARG  117 7200     3742     5940     -96  2344 - 1 5
ATOM    847  CZ  ARG  117  -4.763  40.501  50.306  1.000 45.48
ANISOU 847  CZ  ARG  117 6422     4804     6054     -370  2388 - 2 8 3
ATOM    848  NH1 ARG  117  -3.484  40.683  50.619  1.000 53.21
ANISOU 848  NH1 ARG  117 6867     6451     6900     -2543 2487 3 5 4
ATOM    849  NH2 ARG  117  -5.647  40.487  51.301  1.000 50.00
ANISOU 849  NH2 ARG  117 6265     6511     6220     224  2433 - 1 5 3 4
ATOM    850  N   ILE  118  -3.439  35.832  49.493  1.000 19.30
ANISOU 850  N   ILE  118 2275     1838     3221     128  407  - 6 4 5
ATOM    851  CA  ILE  118  -2.275  35.527  50.331  1.000 18.25
ANISOU 851  CA  ILE  118 2376     1745     2811     78 530 - 4 4 9
ATOM    852  CB  ILE  118  -2.665  35.597  51.820  1.000 18.24
ANISOU 852  CB  ILE  118 2201     1726     3003     346  906  - 3 0 6
ATOM    853  CG2 ILE  118  -1.712  34.851  52.732  1.000 18.49
ANISOU 853  CG2 ILE  118 2077     2158     2792     -202  308  - 5 3 0
ATOM    854  CG1 ILE  118  -2.877  37.031  52.368  1.000 24.69
ANISOU 854  CG1 ILE  118 4436     1808     3136     284  1382 - 4 1 4
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ATOM    855  CD1 ILE  118  -3.786  37.025  53.582  1.000 29.63
ANISOU  855  CD1 ILE  118  6169    3096    1994    189   1258 -1068
ATOM    856  C   ILE  118  -1.692  34.172  49.959  1.000 15.65
ANISOU  856  C   ILE  118  2316    1549    2082    -89    573  -117
ATOM    857  O   ILE  118  -0.463  34.035  49.802  1.000 14.59
ANISOU  857  O   ILE  118  2240    1255    2051    16    286  214
ATOM    858  N   TRP  119  -2.523  33.139  49.784  1.000 14.44
ANISOU  858  N   TRP  119  2125    1592    1771    47    128   -71
ATOM    859  CA  TRP  119  -2.010  31.795  49.518  1.000 13.68
ANISOU  859  CA  TRP  119  1712    1529    1957    -61    220    4 0
ATOM    860  CB  TRP  119  -3.089  30.755  49.932  1.000 14.93
ANISOU  860  CB  TRP  119  1819    1729    2123   -234    295   -3 5
ATOM    861  CG  TRP  119  -2.864  30.482  51.420  1.000 16.19
ANISOU  861  CG  TRP  119  1640    2364    2146   -168    582   1 6 7
ATOM    862  CD2 TRP  119  -2.116  29.430  51.993  1.000 20.41
ANISOU  862  CD2 TRP  119  3189    2414    2151    202    523   4 0 5
ATOM    863  CE2 TRP  119  -2.177  29.580  53.392  1.000 19.84
ANISOU  863  CE2 TRP  119  3536    1818    2184   -439    234   1 3 7
ATOM    864  CE3 TRP  119  -1.390  28.357  51.456  1.000 23.94
ANISOU  864  CE3 TRP  119  5382    1647    2068    561    126   4 0 0
ATOM    865  CD1 TRP  119  -3.340  31.223  52.460  1.000 20.05
ANISOU  865  CD1 TRP  119  3207    2343    2069    -9    189 -139
ATOM    866  NE1 TRP  119  -2.938  30.689  53.649  1.000 20.32
ANISOU  866  NE1 TRP  119  2806    2726    2188    -96    -68  -185
ATOM    867  CZ2 TRP  119  -1.547  28.714  54.281  1.000 22.12
ANISOU  867  CZ2 TRP  119  4071    2256    2078    -17    105   2 2
ATOM    868  CZ3 TRP  119  -0.761  27.490  52.332  1.000 21.52
ANISOU  868  CZ3 TRP  119  4214    2168    1794    311   -193  1 9 7
ATOM    869  CH2 TRP  119  -0.847  27.674  53.715  1.000 24.34
ANISOU  869  CH2 TRP  119  5349    2047    1850    329    148   1 8 3
ATOM    870  C   TRP  119  -1.521  31.634  48.095  1.000 14.27
ANISOU  870  C   TRP  119  2180    1259    1985   -187    334   -6 5
ATOM    871  O   TRP  119  -0.569  30.865  47.855  1.000 14.73
ANISOU  871  O   TRP  119  1996    1653    1946    -67    362   1 0 1
ATOM    872  N   THR  120  -2.109  32.325  47.116  1.000 13.99
ANISOU  872  N   THR  120  2231    1237    1848    106    627   -1 3 7
ATOM    873  CA  THR  120  -1.541  32.275  45.762  1.000 15.19
ANISOU  873  CA  THR  120  1903    2093    1774    9    435  -242
ATOM    874  CB  THR  120  -2.492  32.983  44.787  1.000 16.41
ANISOU  874  CB  THR  120  1934    2304    1995   -331    152   6 6
ATOM    875  OG1 THR  120  -3.738  32.297  44.766  1.000 18.53
ANISOU  875  OG1 THR  120  1891    2288    2863   -236    195   4 0 7
ATOM    876  CG2 THR  120  -1.974  32.906  43.358  1.000 18.02
ANISOU  876  CG2 THR  120  2135    2602    2108    324    322   3 1 8
ATOM    877  C   THR  120  -0.145  32.870  45.727  1.000 14.19
ANISOU  877  C   THR  120  1868    2050    1475    87    285  -167
ATOM    878  O   THR  120   0.756  32.299  45.078  1.000 13.62
ANISOU  878  O   THR  120  1864    1692    1620    301    354   2 1 7
ATOM    879  N   GLN  121   0.114  33.962  46.429  1.000 14.55
ANISOU  879  N   GLN  121  1721    1672    2136    304    175   -6 7
ATOM    880  CA  GLN  121   1.459  34.548  46.483  1.000 15.80
ANISOU  880  CA  GLN  121  2067    1666    2271    -18   -119  3 6 2
ATOM    881  C   GLN  121   2.465  33.642  47.176  1.000 13.73
ANISOU  881  C   GLN  121  1747    1665    1806    -30     18  1 1 4
ATOM    882  O   GLN  121   3.603  33.452  46.685  1.000 15.36
ANISOU  882  O   GLN  121  2063    1688    2084    48    360   - 4 4
ATOM    883  CB  GLN  121   1.315  35.918  47.154  1.000 18.85
ANISOU  883  CB  GLN  121  2537    1426    3200    -73     -5  3 5 6
ATOM    884  CG  GLN  121   2.639  36.558  47.543  1.000 18.88
ANISOU  884  CG  GLN  121  2507    1788    2878    59  9  -2 4 8
ATOM    885  CD  GLN  121   3.468  36.936  46.337  1.000 20.70
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ANISOU 885   CD   GLN   121 2584      2138     3142     -373   -85   2 3 1
ATOM   886   OE1  GLN   121 2.935     37.088   45.224   1.000 22.47
ANISOU 886   OE1  GLN   121 2695      2822     3019     -245    0   1 2 1
ATOM   887   NE2  GLN   121 4.779     37.101   46.522   1.000 25.22
ANISOU 887   NE2  GLN   121 2426      3344     3811      127  -131 1 3 8 5
ATOM   888   N    TYR   122 2.081     33.054   48.299   1.000 12.26
ANISOU 888   N    TYR   122 1747      1514     1399       99   -55  - 2 5 8
ATOM   889   CA   TYR   122 2.896     32.102   49.050   1.000 13.18
ANISOU 889   CA   TYR   122 1901      1643     1464      -20  -253  -1 6 0
ATOM   890   CB   TYR   122 2.211     31.724   50.364   1.000 13.78
ANISOU 890   CB   TYR   122 2045      1435     1756      116    48  - 2 8
ATOM   891   CG   TYR   122 2.994     30.808   51.282   1.000 14.22
ANISOU 891   CG   TYR   122 1966      1681     1758      101    68   1 0 1
ATOM   892   CD1  TYR   122 4.271     31.120   51.722   1.000 17.48
ANISOU 892   CD1  TYR   122 1788      1972     2882      149    -5   4 2 0
ATOM   893   CE1  TYR   122 5.003     30.284   52.576   1.000 18.55
ANISOU 893   CE1  TYR   122 2131      2050     2868      102  -404 2 5 1
ATOM   894   CD2  TYR   122 2.445     29.619   51.731   1.000 20.72
ANISOU 894   CD2  TYR   122 3308      1366     3197     -519 -1524  3 2 3
ATOM   895   CE2  TYR   122 3.140     28.773   52.574   1.000 25.40
ANISOU 895   CE2  TYR   122 3772      1812     4067     -782 -2084  8 7 3
ATOM   896   CZ   TYR   122 4.413     29.101   52.992   1.000 20.93
ANISOU 896   CZ   TYR   122 2985      1742     3224      -96 -1145  3 1 3
ATOM   897   OH   TYR   122 5.068     28.230   53.826   1.000 29.87
ANISOU 897   OH   TYR   122 4830      1998     4522     -680 -3078  6 2 1
ATOM   898   C    TYR   122 3.218     30.876   48.209   1.000 12.33
ANISOU 898   C    TYR   122 1833      1412     1439       89  -218   8 8
ATOM   899   O    TYR   122 4.395     30.507   48.117   1.000 14.25
ANISOU 899   O    TYR   122 1896      1861     1656      339  -242 2 1 6
ATOM   900   N    PHE   123 2.224     30.269   47.573   1.000 11.28
ANISOU 900   N    PHE   123 1950      1297     1041        6  -151   1 8 5
ATOM   901   CA   PHE   123 2.482     29.151   46.665   1.000 12.08
ANISOU 901   CA   PHE   123 1731      1219     1640       64   -60  2 6
ATOM   902   CB   PHE   123 1.139     28.719   46.024   1.000 13.86
ANISOU 902   CB   PHE   123 2048      1550     1666     -104  -276  - 8 2
ATOM   903   CG   PHE   123 1.311     27.516   45.099   1.000 14.44
ANISOU 903   CG   PHE   123 2173      1677     1637      142  -475  - 9 4
ATOM   904   CD1  PHE   123 1.281     26.234   45.614   1.000 13.64
ANISOU 904   CD1  PHE   123 1857      1563     1764      -42  -702  - 2 3 6
ATOM   905   CD2  PHE   123 1.511     27.664   43.729   1.000 13.81
ANISOU 905   CD2  PHE   123 1450      2164     1634     -420  -295  - 2 4 8
ATOM   906   CE1  PHE   123 1.468     25.141   44.795   1.000 17.16
ANISOU 906   CE1  PHE   123 2282      1819     2418      130  -855  - 6 4 4
ATOM   907   CE2  PHE   123 1.715     26.559   42.916   1.000 18.31
ANISOU 907   CE2  PHE   123 2098      2657     2201    -1053   172  - 8 4 5
ATOM   908   CZ   PHE   123 1.706     25.295   43.445   1.000 16.71
ANISOU 908   CZ   PHE   123 1442      2382     2526      -36  -306  - 1 0 7 7
ATOM   909   C    PHE   123 3.489     29.511   45.581   1.000 13.48
ANISOU 909   C    PHE   123 2004      1472     1645      236   157   1 8
ATOM   910   O    PHE   123 4.424     28.768   45.242   1.000 13.07
ANISOU 910   O    PHE   123 1591      1498     1876       42   -78  - 1 7 2
ATOM   911   N    ASP   124 3.294     30.684   44.948   1.000 13.83
ANISOU 911   N    ASP   124 1490      1575     2189       51   207 2 8 8
ATOM   912   CA   ASP   124 4.207     31.036   43.861   1.000 13.75
ANISOU 912   CA   ASP   124 1505      1330     2389      458   398   3 4 4
ATOM   913   CB   ASP   124 3.708     32.352   43.242   1.000 18.95
ANISOU 913   CB   ASP   124 2650      1970     2580      656   -63   9 2 6
ATOM   914   CG   ASP   124 4.470     32.708   41.989   1.000 27.54
ANISOU 914   CG   ASP   124 5327      2099     3036     -123   939   8 8 0
ATOM   915   OD1  ASP   124 4.541     31.904   41.023   1.000 37.04
ANISOU 915   OD1  ASP   124 6362      3225     4485      108  2616  - 3 3 1
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ATOM    916  OD2 ASP  124 4.985    33.843   42.011  1.000 32.60
ANISOU  916  OD2 ASP  124 4724     3509     4151    -1539 234  8 51
ATOM    917  C   ASP  124 5.645    31.164   44.328  1.000 14.49
ANISOU  917  C   ASP  124 1493     1721     2293    327   485   4 82
ATOM    918  O   ASP  124 6.591    30.721   43.674  1.000 14.52
ANISOU  918  O   ASP  124 1477     1363     2679    289   497   3 07
ATOM    919  N   ARG  125 5.866    31.777   45.499  1.000 14.03
ANISOU  919  N   ARG  125 1501     1271     2558    353   398   4 14
ATOM    920  CA  ARG  125 7.214    31.863   46.044  1.000 16.40
ANISOU  920  CA  ARG  125 1642     1625     2963    194   178   2 26
ATOM    921  C   ARG  125 7.828    30.494   46.346  1.000 14.69
ANISOU  921  C   ARG  125 1396     1688     2496    232   -25   1 53
ATOM    922  O   ARG  125 8.999    30.245   46.034  1.000 14.10
ANISOU  922  O   ARG  125 1279     1656     2424    7     -205  -2 01
ATOM    923  CB  ARG  125 7.213    32.705   47.318  1.000 18.13
ANISOU  923  CB  ARG  125 1950     1902     3035    787   -81   4 6
ATOM    924  CG  ARG  125 7.045    34.193   47.041  1.000 23.51
ANISOU  924  CG  ARG  125 2232     1780     4919    883   -36   -2 25
ATOM    925  CD  ARG  125 8.391    34.815   46.694  1.000 29.33
ANISOU  925  CD  ARG  125 3596     2824     4724    -667  237   -1 87
ATOM    926  NE  ARG  125 8.194    36.262   46.803  1.000 32.99
ANISOU  926  NE  ARG  125 4350     2766     5418    -678  -1642 1 56
ATOM    927  CZ  ARG  125 8.868    37.153   47.495  1.000 27.38
ANISOU  927  CZ  ARG  125 2292     2758     5353    -276  -580  -2 46
ATOM    928  NH1 ARG  125 9.916    36.821   48.235  1.000 38.55
ANISOU  928  NH1 ARG  125 4611     3604     6433    449   -2476 -6 69
ATOM    929  NH2 ARG  125 8.491    38.423   47.442  1.000 30.26
ANISOU  929  NH2 ARG  125 4062     2570     4865    -369  -835  363
ATOM    930  N   GLN  126 7.065    29.573   46.920  1.000 12.36
ANISOU  930  N   GLN  126 1316     1376     2002    248   -63   -2 64
ATOM    931  CA  GLN  126 7.524    28.201   47.153  1.000 13.39
ANISOU  931  CA  GLN  126 1765     1323     1999    219   -355  -3 77
ATOM    932  CB  AGLN 126 6.363    27.455   47.828  0.500 16.24
ANISOU  932  CB  AGLN 126 2422     1391     2357    188   202   -1 92
ATOM    933  CG  AGLN 126 6.149    27.758   49.284  0.500 18.83
ANISOU  933  CG  AGLN 126 2761     2021     2371    68 233 -2 10
ATOM    934  CD  AGLN 126 7.077    27.146   50.298  0.500 23.94
ANISOU  934  CD  AGLN 126 3578     2745     2774    -604  -757  3 3
ATOM    935  OE1 AGLN 126 7.181    27.683   51.419  0.500 35.94
ANISOU  935  OE1 AGLN 126 6788     3731     3136    -578  -1567 - 4 78
ATOM    936  NE2 AGLN 126 7.774    26.055   50.008  0.500 24.63
ANISOU  936  NE2 AGLN 126 4491     1118     3751    -881  -2407 4 62
ATOM    937  CB  BGLN 126 6.525    27.417   48.018  0.500 13.36
ANISOU  937  CB  BGLN 126 1695     1137     2245    602   -114  -2 55
ATOM    938  CG  BGLN 126 6.604    27.750   49.497  0.500 18.28
ANISOU  938  CG  BGLN 126 2537     2257     2153    -68   -176  -1 05
ATOM    939  CD  BGLN 126 5.442    27.237   50.319  0.500 18.42
ANISOU  939  CD  BGLN 126 2227     2573     2198    344   -159  106
ATOM    940  OE1 BGLN 126 5.605    26.442   51.242  0.500 25.36
ANISOU  940  OE1 BGLN 126 3289     3517     2828    -100  -223  9 53
ATOM    941  NE2 BGLN 126 4.231    27.685   50.003  0.500 25.02
ANISOU  941  NE2 BGLN 126 2427     2669     4413    1004  -83   - 2 98
ATOM    942  C   GLN  126 7.860    27.448   45.861  1.000 12.95
ANISOU  942  C   GLN  126 1506     1434     1979    307   -372  -3 66
ATOM    943  O   GLN  126 8.859    26.721   45.748  1.000 11.66
ANISOU  943  O   GLN  126 1461     1142     1827    182   -85   1 59
ATOM    944  N   TYR  127 6.960    27.578   44.868  1.000 11.61
ANISOU  944  N   TYR  127 1400     1276     1735    146   -168  - 10
ATOM    945  CA  TYR  127 7.152    26.869   43.585  1.000 11.21
ANISOU  945  CA  TYR  127 1469     1242     1550    -92   -40   192
ATOM    946  CB  TYR  127 5.901    26.940   42.724  1.000 11.82
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ANISOU 946   CB  TYR  127 1346      1655    1491     -13    82 4 7
ATOM   947   CG  TYR  127 5.791    26.069  41.496 1.000 11.49
ANISOU 947   CG  TYR  127 1278      1428    1660      -4 -4 1 0
ATOM   948   CD1 TYR  127 6.550    24.928  41.270 1.000 11.28
ANISOU 948   CD1 TYR  127 1030      1334    1921     -87  -100 3 3
ATOM   949   CE1 TYR  127 6.406    24.153  40.115 1.000 11.47
ANISOU 949   CE1 TYR  127 1164      1167    2027     -51   -53 2 1
ATOM   950   CD2 TYR  127 4.871    26.410  40.500 1.000 11.98
ANISOU 950   CD2 TYR  127 1677      1093    1784     204  -219 -1 0 0
ATOM   951   CE2 TYR  127 4.715    25.655  39.357 1.000 11.37
ANISOU 951   CE2 TYR  127 1539      1118    1665     140   -68  - 7 3
ATOM   952   CZ  TYR  127 5.494    24.508  39.163 1.000 11.02
ANISOU 952   CZ  TYR  127 1202      1226    1760      91 48 -1 2 5
ATOM   953   OH  TYR  127 5.379    23.720  38.030 1.000 11.57
ANISOU 953   OH  TYR  127 1547      1138    1712      94 177 - 3 4
ATOM   954   C   TYR  127 8.386    27.392  42.882 1.000 10.83
ANISOU 954   C   TYR  127 1296       989    1830     230   -43 378
ATOM   955   O   TYR  127 9.185    26.605  42.375 1.000 10.86
ANISOU 955   O   TYR  127 1292      1232    1603     164  -237 - 4 2
ATOM   956   N   THR  128 8.565    28.716  42.865 1.000 10.98
ANISOU 956   N   THR  128 1554       976  1642      212    -9 5 5 7
ATOM   957   CA  THR  128 9.766    29.305  42.295 1.000 11.80
ANISOU 957   CA  THR  128 1686      1125    1673     -47  -169 386
ATOM   958   CB  THR  128 9.605    30.849  42.378 1.000 12.66
ANISOU 958   CB  THR  128 1873      1074    1864     -52  -233 521
ATOM   959   OG1 THR  128 8.530    31.286  41.517 1.000 16.74
ANISOU 959   OG1 THR  128 2223      1597    2542     124  -457 998
ATOM   960   CG2 THR  128 10.878   31.510  41.893 1.000 16.54
ANISOU 960   CG2 THR  128 1871       778    3635     262   655 1 3 8
ATOM   961   C   THR  128 11.040   28.828  42.964 1.000 11.26
ANISOU 961   C   THR  128 1562       980  1738      -71  -162 1 4 8
ATOM   962   O   THR  128 11.995   28.458  42.258 1.000 12.16
ANISOU 962   O   THR  128 1769      1092    1758      17 26 2 7 9
ATOM   963   N   ALA  129 11.083   28.802  44.300 1.000 10.39
ANISOU 963   N   ALA  129 1183      1001    1763      70 -118 1 4 7
ATOM   964   CA  ALA  129 12.273   28.386  45.037 1.000 10.59
ANISOU 964   CA  ALA  129 1206       945  1873      -69  -170 2 8 1
ATOM   965   CB  ALA  129 12.113   28.603  46.536 1.000 12.46
ANISOU 965   CB  ALA  129 2113       851  1769      82  -218 5 7 7
ATOM   966   C   ALA  129 12.575   26.906  44.802 1.000 11.35
ANISOU 966   C   ALA  129 1258       883    2170     -16  -141 4 1 0
ATOM   967   O   ALA  129 13.738   26.485  44.641 1.000 10.93
ANISOU 967   O   ALA  129 1202      1157    1796     -36  -213 1 2 1
ATOM   968   N   SER  130 11.519   26.086  44.750 1.000 12.27
ANISOU 968   N   SER  130 1280       984    2398     -65    -1 - 2 4
ATOM   969   CA  SER  130 11.682   24.650  44.512 1.000 10.89
ANISOU 969   CA  SER  130 1623       876  1638      -85 44 3 7 0
ATOM   970   CB  ASER 130 10.342   23.940  44.716 0.500 10.08
ANISOU 970   CB  ASER 130 1432       603    1793     213   247 4 1 3
ATOM   971   OG  ASER 130 9.771    24.063  46.006 0.500 9.12
ANISOU 971   OG  ASER 130 1021       651    1792      91 1  - 1 4 3
ATOM   972   CB  BSER 130 10.364   23.919  44.765 0.500 10.60
ANISOU 972   CB  BSER 130 1687       822  1521      -45   318 1 5 8
ATOM   973   OG  BSER 130 9.418    24.098  43.734 0.500 16.22
ANISOU 973   OG  BSER 130 1717      1289    3156     137  -525 3 4 8
ATOM   974   C   SER  130 12.214   24.373  43.110 1.000 10.53
ANISOU 974   C   SER  130 1586       733    1684    -166   210 4 8 4
ATOM   975   O   SER  130 13.137   23.532  42.942 1.000 11.17
ANISOU 975   O   SER  130 1385      1012    1849    -151   -95 1 4 0
ATOM   976   N   ARG  131 11.680   25.044  42.079 1.000 10.46
ANISOU 976   N   ARG  131 1578       861  1534      -87   -66 9 9
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- 122 -

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ATOM    977  CA   ARG  131  12.260  24.839  40.742  1.000 10.60
ANISOU  977  CA   ARG  131  1480    1110    1438     61 -288  8 2
ATOM    978  CB   ARG  131  11.426  25.553  39.679  1.000 12.99
ANISOU  978  CB   ARG  131  1893    1369    1673     63 -525  2 7 6
ATOM    979  CG   ARG  131  10.003  25.065  39.431  1.000 13.64
ANISOU  979  CG   ARG  131  1707    1735    1742    335    -559 - 8 6
ATOM    980  CD   ARG  131   9.349  25.669  38.206  1.000 17.71
ANISOU  980  CD   ARG  131  2078    1973    2677     81 -983  7 0 1
ATOM    981  NE   ARG  131   9.453  27.113  38.015  1.000 19.76
ANISOU  981  NE   ARG  131  2716    2034    2757    -25   -525 7 1 3
ATOM    982  CZ   ARG  131   8.629  28.004  38.568  1.000 21.24
ANISOU  982  CZ   ARG  131  3688    1878    2503     -8  -128  6 4 7
ATOM    983  NH1  ARG  131   7.631  27.634  39.366  1.000 21.32
ANISOU  983  NH1  ARG  131  2792    3142    2166   -486  -667 5 7
ATOM    984  NH2  ARG  131   8.771  29.310  38.361  1.000 27.83
ANISOU  984  NH2  ARG  131  4649    1822    4103    -90  -422 5 6 1
ATOM    985  C    ARG  131  13.714  25.323  40.688  1.000 10.42
ANISOU  985  C    ARG  131  1542    1078    1339     50 -103  1
ATOM    986  O    ARG  131  14.568  24.683  40.080  1.000 10.94
ANISOU  986  O    ARG  131  1544    1105    1506    177  -134 4 2
ATOM    987  N    ALA  132  14.028  26.438  41.343  1.000 10.97
ANISOU  987  N    ALA  132  1477    1129    1563     74 -364  - 4 5
ATOM    988  CA   ALA  132  15.379  26.983  41.343  1.000 11.10
ANISOU  988  CA   ALA  132  1539     944    1735      9 -102  9 7
ATOM    989  CB   ALA  132  15.429  28.344  42.048  1.000 12.82
ANISOU  989  CB   ALA  132  1711    1171    1987    -48  -248 - 1 9 8
ATOM    990  C    ALA  132  16.393  26.045  41.995  1.000 11.55
ANISOU  990  C    ALA  132  1085    1107    2197   -197   305  7 4 5
ATOM    991  O    ALA  132  17.481  25.832  41.432  1.000 11.81
ANISOU  991  O    ALA  132  1081    1809    1599   -204    17 - 9
ATOM    992  N    VAL  133  16.061  25.490  43.175  1.000 11.16
ANISOU  992  N    VAL  133  1260    1356    1623   -148    51 3 5 0
ATOM    993  CA   VAL  133  17.011  24.587  43.840  1.000 11.62
ANISOU  993  CA   VAL  133  1505    1529    1380    -69  -297 8 9
ATOM    994  CB   VAL  133  16.738  24.418  45.344  1.000 12.14
ANISOU  994  CB   VAL  133  1376    1674    1564    -74   -25  3 6 4
ATOM    995  CG1  VAL  133  15.550  23.501  45.608  1.000 14.96
ANISOU  995  CG1  VAL  133  1705    2316    1662   -706     8  - 3 5 7
ATOM    996  CG2  VAL  133  17.981  23.864  46.033  1.000 15.63
ANISOU  996  CG2  VAL  133  1755    2340    1845   -341  -677 5 5 1
ATOM    997  C    VAL  133  17.079  23.268  43.065  1.000 11.71
ANISOU  997  C    VAL  133  1376    1363    1711    -24  -425 1 6 9
ATOM    998  O    VAL  133  18.198  22.733  42.925  1.000 11.55
ANISOU  998  O    VAL  133  1391    1453    1545     -4  -116  3 9 8
ATOM    999  N    ALA  134  15.982  22.758  42.480  1.000 12.87
ANISOU  999  N    ALA  134  1399    1517    1973     28  -334  - 2 2 8
ATOM   1000  CA   ALA  134  16.084  21.557  41.621  1.000 10.57
ANISOU 1000  CA   ALA  134  1106    1220    1691    153  -298 9 6
ATOM   1001  CB   ALA  134  14.699  21.096  41.186  1.000 12.20
ANISOU 1001  CB   ALA  134  1254    1589    1794     35  -303 - 1 2 7
ATOM   1002  C    ALA  134  16.968  21.797  40.399  1.000 12.58
ANISOU 1002  C    ALA  134  1393    1399    1987    272    -4 2 7 7
ATOM   1003  O    ALA  134  17.712  20.924  39.970  1.000 11.01
ANISOU 1003  O    ALA  134  1254    1358    1574     83 -268  2 6
ATOM   1004  N    ARG  135  16.908  22.995  39.809  1.000 12.03
ANISOU 1004  N    ARG  135  1517    1230    1824    -62  -327 8 7
ATOM   1005  CA   ARG  135  17.773  23.353  38.676  1.000 13.23
ANISOU 1005  CA   ARG  135  1854    1158    2015   -270  -209 1 6 1
ATOM   1006  CB   ARG  135  17.393  24.734  38.170  1.000 14.57
ANISOU 1006  CB   ARG  135  2203    1339    1994    -45  -541 2 2 2
ATOM   1007  CG   ARG  135  17.753  25.160  36.797  1.000 19.22
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- 123 -

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ANISOU 1007 CG  ARG 135 4204     1120    1980    -490 -433 15 0
ATOM   1008 CD  ARG 135 17.237  26.563  36.471  1.000 22.14
ANISOU 1008 CD  ARG 135 4046     1500    2868    -159  315  8 2 2
ATOM   1009 NE  ARG 135 15.831  26.607  36.077  1.000 22.66
ANISOU 1009 NE  ARG 135 4239     1404    2965     -94   47 2 5 7
ATOM   1010 CZ  ARG 135 14.802  27.184  36.684  1.000 21.69
ANISOU 1010 CZ  ARG 135 4004     1906    2333      92 -506  6 4
ATOM   1011 NH1 ARG 135 14.917  27.843  37.833  1.000 22.26
ANISOU 1011 NH1 ARG 135 4114     2532    1812     460 -833 3 4 1
ATOM   1012 NH2 ARG 135 13.582  27.113  36.149  1.000 22.31
ANISOU 1012 NH2 ARG 135 4000     2243    2234    -544 -419 8
ATOM   1013 C   ARG 135 19.251  23.275  39.057  1.000 12.70
ANISOU 1013 C   ARG 135 1742     1264    1821    -119  -16  4 3 0
ATOM   1014 O   ARG 135 20.069  22.818  38.238  1.000 14.67
ANISOU 1014 O   ARG 135 2133     1529    1910      19 169 3 9 1
ATOM   1015 N   GLU 136 19.572  23.712  40.266  1.000 12.15
ANISOU 1015 N   GLU 136 1423     1372    1820     -36   70 4 3 0
ATOM   1016 CA  GLU 136 20.960  23.630  40.763  1.000 14.52
ANISOU 1016 CA  GLU 136 1622     1701    2194     -90 -197 3 7 1
ATOM   1017 CB  GLU 136 21.212  24.513  41.981  1.000 15.59
ANISOU 1017 CB  GLU 136 1502     1781    2642      14 -231  1 1
ATOM   1018 CG  GLU 136 21.064  26.020  41.783  1.000 18.01
ANISOU 1018 CG  GLU 136 2010     1762    3071    -232 -153 1 2 6
ATOM   1019 CD  GLU 136 21.798  26.484  40.537  1.000 20.18
ANISOU 1019 CD  GLU 136 2071     2079    3519    -308   89 3 6 9
ATOM   1020 OE1 GLU 136 22.987  26.148  40.394  1.000 24.64
ANISOU 1020 OE1 GLU 136 2060     2937    4364    -262  338  6 1 5
ATOM   1021 OE2 GLU 136 21.195  27.150  39.670  1.000 24.19
ANISOU 1021 OE2 GLU 136 2479     2327    4385    -381  317  1 4 2 6
ATOM   1022 C   GLU 136 21.364  22.186  41.076  1.000 14.00
ANISOU 1022 C   GLU 136 1338     1619    2361    -112 -442 2 2 3
ATOM   1023 O   GLU 136 22.508  21.781  40.833  1.000 13.86
ANISOU 1023 O   GLU 136 1366     1890    2009    -100 -287 3 2 9
ATOM   1024 N   VAL 137 20.472  21.338  41.580  1.000 11.78
ANISOU 1024 N   VAL 137 1309     1451    1715     148 -223 8 5
ATOM   1025 CA  VAL 137 20.753  19.896  41.771  1.000 12.49
ANISOU 1025 CA  VAL 137 1369     1522    1853     240  -69  2 8 9
ATOM   1026 CB  VAL 137 19.560  19.165  42.429  1.000 12.41
ANISOU 1026 CB  VAL 137 1422     1424    1869     -67  -85 - 2 0 4
ATOM   1027 CG1 VAL 137 19.728  17.634  42.401  1.000 12.55
ANISOU 1027 CG1 VAL 137 1371     1508    1892     182  185  1 1 1
ATOM   1028 CG2 VAL 137 19.355  19.607  43.852  1.000 11.35
ANISOU 1028 CG2 VAL 137 1461     1281    1572     182 -254 2 8 8
ATOM   1029 C   VAL 137 21.100  19.241  40.435  1.000 12.48
ANISOU 1029 C   VAL 137 1202     1428    2113     150  -16  8 5
ATOM   1030 O   VAL 137 22.057  18.462  40.287  1.000 13.03
ANISOU 1030 O   VAL 137 1021     1683    2249     149    1  1 4 6
ATOM   1031 N   LEU 138 20.309  19.562  39.401  1.000 10.28
ANISOU 1031 N   LEU 138 1198      881 1829     -15  158 2 2 6
ATOM   1032 CA  LEU 138 20.571  19.029  38.066  1.000 12.48
ANISOU 1032 CA  LEU 138 1312     1408    2024     110  273  - 5 2
ATOM   1033 CB  LEU 138 19.398  19.358  37.130  1.000 11.81
ANISOU 1033 CB  LEU 138 1260     1586    1642     -20  383  4 3
ATOM   1034 CG  LEU 138 18.036  18.726  37.457  1.000 10.77
ANISOU 1034 CG  LEU 138 1391     1397    1304     -83  219  2 1 3
ATOM   1035 CD1 LEU 138 16.916  19.324  36.596  1.000 12.72
ANISOU 1035 CD1 LEU 138 1416     1587    1829     -59  -25  1 7 3
ATOM   1036 CD2 LEU 138 18.052  17.207  37.320  1.000 14.32
ANISOU 1036 CD2 LEU 138 1986     1390    2065     -79  296  3 7 0
ATOM   1037 C   LEU 138 21.903  19.525  37.505  1.000 13.61
ANISOU 1037 C   LEU 138 1305     2026    1840     -65  174  5
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ATOM    1038 O    LEU  138 22.695  18.760  36.920  1.000 14.97
ANISOU  1038 O    LEU  138 1125    2247    2313    105   234  1 7 8
ATOM    1039 N    ARG  139 22.184  20.816  37.614  1.000 13.26
ANISOU  1039 N    ARG  139 1432    2046    1561    -155  219   3 1 7
ATOM    1040 CA   ARG  139 23.397  21.372  37.085  1.000 14.71
ANISOU  1040 CA   ARG  139 1648    1941    2000    -27   502   4 4 7
ATOM    1041 C    ARG  139 24.636  20.815  37.775  1.000 15.16
ANISOU  1041 C    ARG  139 1425    2101    2235    -158  324  1 1 6
ATOM    1042 O    ARG  139 25.650  20.495  37.166  1.000 18.15
ANISOU  1042 O    ARG  139 1628    2581    2688    18 612 3 3 9
ATOM    1043 CB   ARG  139 23.394  22.926  37.206  1.000 19.67
ANISOU  1043 CB   ARG  139 1749    1923    3803    -196  186   2 5 2
ATOM    1044 CG   ARG  139 24.418  23.487  36.237  1.000 28.66
ANISOU  1044 CG   ARG  139 3924    2584    4383    -2305 882  - 5 6 3
ATOM    1045 CD   ARG  139 24.245  24.997  36.111  1.000 39.58
ANISOU  1045 CD   ARG  139 6801    2389    5849    -3273 119  - 3 0 6
ATOM    1046 NE   ARG  139 24.910  25.660  37.210  1.000 47.91
ANISOU  1046 NE   ARG  139 9548    2435    6222    -2157 -1331 - 7 0 8
ATOM    1047 CZ   ARG  139 24.493  26.682  37.928  1.000 45.42
ANISOU  1047 CZ   ARG  139 6941    4516    5802    -882  -2118 - 1 2 3 8
ATOM    1048 NH1  ARG  139 23.316  27.273  37.722  1.000 64.33
ANISOU  1048 NH1  ARG  139 7248    8153    9039    93 -2965 - 9 8 0
ATOM    1049 NH2  ARG  139 25.309  27.109  38.888  1.000 32.62
ANISOU  1049 NH2  ARG  139 5020    4758    2616    -2746 590  1 6 7
ATOM    1050 N    ALA  140 24.562  20.684  39.096  1.000 14.85
ANISOU  1050 N    ALA  140 1287    2204    2151    -517  -26  - 4 6
ATOM    1051 CA   ALA  140 25.730  20.257  39.856  1.000 15.80
ANISOU  1051 CA   ALA  140 989 2649    2366    -309  -9  - 4 0 1
ATOM    1052 CB   ALA  140 25.444  20.442  41.330  1.000 19.36
ANISOU  1052 CB   ALA  140 2685    2447    2222    243   -435 - 4 8 0
ATOM    1053 C    ALA  140 26.111  18.806  39.584  1.000 16.86
ANISOU  1053 C    ALA  140 1555    2795    2054    12 -186  - 4 5 8
ATOM    1054 O    ALA  140 27.258  18.403  39.796  1.000 18.90
ANISOU  1054 O    ALA  140 1538    2686    2958    -21   60 1 4 5
ATOM    1055 N    THR  141 25.147  18.025  39.098  1.000 17.53
ANISOU  1055 N    THR  141 1779    2532    2350    -528  218  - 1 0 8
ATOM    1056 CA   THR  141 25.340  16.625  38.765  1.000 15.59
ANISOU  1056 CA   THR  141 1256    2401    2268    -192  -95   2 9 1
ATOM    1057 CB   THR  141 24.207  15.735  39.343  1.000 14.77
ANISOU  1057 CB   THR  141 1238    2200    2172    155   282   3 0 1
ATOM    1058 OG1  THR  141 22.946  16.168  38.849  1.000 12.47
ANISOU  1058 OG1  THR  141 1249    1565    1926    -31   295   4 7 6
ATOM    1059 CG2  THR  141 24.167  15.818  40.859  1.000 14.82
ANISOU  1059 CG2  THR  141 1394    2077    2160    135   -47 1 7 7
ATOM    1060 C    THR  141 25.423  16.374  37.257  1.000 16.11
ANISOU  1060 C    THR  141 1732    2046    2343    303   583   3 2 5
ATOM    1061 O    THR  141 25.432  15.235  36.778  1.000 17.55
ANISOU  1061 O    THR  141 1991    2104    2573    237   555   2 4 9
ATOM    1062 N    GLY  142 25.474  17.416  36.446  1.000 17.74
ANISOU  1062 N    GLY  142 2127    2197    2416    303   260   5 0 1
ATOM    1063 CA   GLY  142 25.611  17.263  34.987  1.000 17.32
ANISOU  1063 CA   GLY  142 1642    2494    2447    -160  453   5 1 7
ATOM    1064 C    GLY  142 24.426  16.556  34.358  1.000 16.37
ANISOU  1064 C    GLY  142 1619    1893    2710    261   472   4 2
ATOM    1065 O    GLY  142 24.654  15.824  33.379  1.000 18.43
ANISOU  1065 O    GLY  142 2243    2558    2201    57 798 1 6 3
ATOM    1066 N    THR  143 23.232  16.738  34.907  1.000 13.99
ANISOU  1066 N    THR  143 1531    1429    2356    83 430 3 5 0
ATOM    1067 CA   THR  143 22.049  16.003  34.472  1.000 14.69
ANISOU  1067 CA   THR  143 1768    1591    2223    8   342 9 3
ATOM    1068 CB   THR  143 21.208  15.584  35.700  1.000 15.52
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ANISOU 1068 CB  THR  143 1457     1653     2785     55 419 5 2 9
ATOM   1069 OG1 THR  143 22.037   14.784   36.573   1.000 14.63
ANISOU 1069 OG1 THR  143 1296     1792     2471     52 434 3 6 9
ATOM   1070 CG2 THR  143 20.044   14.738   35.231   1.000 14.24
ANISOU 1070 CG2 THR  143 1761     1981     1669     3  379 1 9 2
ATOM   1071 C   THR  143 21.135   16.785   33.532   1.000 13.96
ANISOU 1071 C   THR  143 1553     1708     2044     128    479  -1 3 1
ATOM   1072 O   THR  143 20.642   17.828   33.923   1.000 15.65
ANISOU 1072 O   THR  143 2374     1580     1995     315    486  5 5
ATOM   1073 N   GLU  144 20.928   16.279   32.322   1.000 15.32
ANISOU 1073 N   GLU  144 1734     1904     2184     -156   260  -2 7 1
ATOM   1074 CA  GLU  144 19.917   16.693   31.362   1.000 17.30
ANISOU 1074 CA  GLU  144 1686     2470     2417     -377   152  1 0 6
ATOM   1075 C   GLU  144 18.774   15.693   31.292   1.000 16.84
ANISOU 1075 C   GLU  144 1633     2380     2386     -298   313  -2 4 2
ATOM   1076 O   GLU  144 18.922   14.631   30.680   1.000 16.71
ANISOU 1076 O   GLU  144 1470     2057     2821     -43    610  5 8
ATOM   1077 CB  GLU  144 20.539   16.856   29.970   1.000 21.91
ANISOU 1077 CB  GLU  144 2747     3417     2162     -1508 31 - 8
ATOM   1078 CG  GLU  144 19.568   17.063   28.825   1.000 37.93
ANISOU 1078 CG  GLU  144 6652     4374     3385     -2057 -2082 1767
ATOM   1079 CD  GLU  144 19.293   18.507   28.466   1.000 43.55
ANISOU 1079 CD  GLU  144 7869     4258     4419     -2497 -2259 2129
ATOM   1080 OE1 GLU  144 19.602   19.365   29.326   1.000 51.81
ANISOU 1080 OE1 GLU  144 9843     4613     5230     -3180 -832 1126
ATOM   1081 OE2 GLU  144 18.766   18.798   27.367   1.000 40.12
ANISOU 1081 OE2 GLU  144 5551     6029     3662     -285   -115 2660
ATOM   1082 N   PRO  145 17.620   15.959   31.908   1.000 14.29
ANISOU 1082 N   PRO  145 1634     1364     2432     -4 208 2 6 5
ATOM   1083 CD  PRO  145 17.256   17.136   32.718   1.000 14.14
ANISOU 1083 CD  PRO  145 1735     1778     1859     -55    32 1 6 7
ATOM   1084 CA  PRO  145 16.507   15.000   31.807   1.000 13.72
ANISOU 1084 CA  PRO  145 1484     1391     2337     66 173 4 6 6
ATOM   1085 CB  PRO  145 15.406   15.701   32.606   1.000 14.20
ANISOU 1085 CB  PRO  145 1459     1636     2302     161    -41  2 8 9
ATOM   1086 CG  PRO  145 16.132   16.608   33.561   1.000 14.43
ANISOU 1086 CG  PRO  145 1796     2007     1679     -23    -42  4 4 9
ATOM   1087 C   PRO  145 16.076   14.794   30.372   1.000 15.18
ANISOU 1087 C   PRO  145 1745     1665     2359     -192   231  2 8 7
ATOM   1088 O   PRO  145 16.178   15.685   29.509   1.000 15.40
ANISOU 1088 O   PRO  145 2430     1511     1910     -85    613  - 1 5
ATOM   1089 N   ASP  146 15.544   13.613   30.070   1.000 15.79
ANISOU 1089 N   ASP  146 2019     1611     2367     -191   666  8 1
ATOM   1090 CA  ASP  146 14.918   13.366   28.773   1.000 16.74
ANISOU 1090 CA  ASP  146 2095     1759     2506     -348   575  - 7 7
ATOM   1091 CB  ASP  146 14.300   11.966   28.727   1.000 18.99
ANISOU 1091 CB  ASP  146 2508     1729     2977     -323   780  - 4 3 9
ATOM   1092 CG  ASP  146 13.504   11.784   27.444   1.000 27.04
ANISOU 1092 CG  ASP  146 4012     2450     3813     -720   -229 - 8 0 5
ATOM   1093 OD1 ASP  146 12.295   12.121   27.409   1.000 38.65
ANISOU 1093 OD1 ASP  146 3943     4889     5852     -595   -1282 - 3 2 3
ATOM   1094 OD2 ASP  146 14.091   11.311   26.466   1.000 39.95
ANISOU 1094 OD2 ASP  146 6913     5052     3214     16 0   -1182
ATOM   1095 C   ASP  146 13.860   14.441   28.552   1.000 16.65
ANISOU 1095 C   ASP  146 2461     1904     1961     -128   580  - 4 0
ATOM   1096 O   ASP  146 13.041   14.605   29.457   1.000 15.67
ANISOU 1096 O   ASP  146 2110     1935     1908     -334   381  - 4 2 0
ATOM   1097 N   GLY  147 13.871   15.149   27.429   1.000 20.60
ANISOU 1097 N   GLY  147 3484     2416     1927     -26    419  1 2 9
ATOM   1098 CA  GLY  147 12.903   16.212   27.155   1.000 18.06
ANISOU 1098 CA  GLY  147 2771     2451     1638     -382   98 9 3
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ATOM    1099 C    GLY  147 13.361  17.574  27.609 1.000 18.73
ANISOU  1099 C    GLY  147 2836    2195    2085   -524  143   5 27
ATOM    1100 O    GLY  147 12.676  18.570  27.282 1.000 18.34
ANISOU  1100 O    GLY  147 2865    2416    1687   -413  -72   3 89
ATOM    1101 N    GLY  148 14.498  17.634  28.316 1.000 16.35
ANISOU  1101 N    GLY  148 2936    1506    1772   -157  142   8 8
ATOM    1102 CA   GLY  148 15.116  18.889  28.747 1.000 15.34
ANISOU  1102 CA   GLY  148 2723    1279    1829   55 450 - 26
ATOM    1103 C    GLY  148 14.768  19.339  30.144 1.000 12.97
ANISOU  1103 C    GLY  148 2231    1416    1280   -93   -62   4 07
ATOM    1104 O    GLY  148 13.769  18.930  30.771 1.000 13.79
ANISOU  1104 O    GLY  148 2301    1376    1561   -164  88 3 2 3
ATOM    1105 N    VAL  149 15.604  20.224  30.718 1.000 12.81
ANISOU  1105 N    VAL  149 1815    1366    1686   155   -31   2 38
ATOM    1106 CA   VAL  149 15.388  20.724  32.079 1.000 11.81
ANISOU  1106 CA   VAL  149 1333    1390    1765   54 -92 1 2 9
ATOM    1107 CB   VAL  149 16.594  21.636  32.480 1.000 11.97
ANISOU  1107 CB   VAL  149 1136    1696    1717   -100  246   1 24
ATOM    1108 CG1  VAL  149 16.358  22.336  33.802 1.000 15.26
ANISOU  1108 CG1  VAL  149 1941    1922    1936   -195  55 - 223
ATOM    1109 CG2  VAL  149 17.868  20.794  32.538 1.000 17.21
ANISOU  1109 CG2  VAL  149 1231    2045    3265   45 102 -103
ATOM    1110 C    VAL  149 14.101  21.482  32.280 1.000 11.32
ANISOU  1110 C    VAL  149 1186    1303    1813   -78   131   4 79
ATOM    1111 O    VAL  149 13.378  21.218  33.253 1.000 12.35
ANISOU  1111 O    VAL  149 1664    1423    1608   -71   229   1 67
ATOM    1112 N    GLU  150 13.752  22.463  31.460 1.000 11.96
ANISOU  1112 N    GLU  150 1347    1453    1746   29 -36 4 2 0
ATOM    1113 CA   GLU  150 12.592  23.286  31.815 1.000 10.90
ANISOU  1113 CA   GLU  150 1623    1359    1159   118   0   4 05
ATOM    1114 CB   GLU  150 12.608  24.601  30.999 1.000 17.60
ANISOU  1114 CB   GLU  150 2530    1470    2687   181   -161 9 0 7
ATOM    1115 CG   GLU  150 13.811  25.488  31.314 1.000 17.86
ANISOU  1115 CG   GLU  150 2744    797 3246    246   434 2 0 2
ATOM    1116 CD   GLU  150 13.956  25.929  32.738 1.000 19.47
ANISOU  1116 CD   GLU  150 3018    1353    3027   -97   -84   6 62
ATOM    1117 OE1  GLU  150 12.951  26.005  33.475 1.000 18.21
ANISOU  1117 OE1  GLU  150 3035    1512    2373   -178  -321 5 36
ATOM    1118 OE2  GLU  150 15.109  26.237  33.122 1.000 22.59
ANISOU  1118 OE2  GLU  150 2993    1664    3927   -38   -150 2 84
ATOM    1119 C    GLU  150 11.277  22.533  31.705 1.000 12.22
ANISOU  1119 C    GLU  150 1429    1540    1676   235   147   - 5
ATOM    1120 O    GLU  150 10.341  22.757  32.530 1.000 13.44
ANISOU  1120 O    GLU  150 1739    1474    1894   315   470   2 88
ATOM    1121 N    ALA  151 11.118  21.625  30.742 1.000 11.88
ANISOU  1121 N    ALA  151 1783    1255    1477   94 45 2 5 3
ATOM    1122 CA   ALA  151 9.881   20.844  30.698 1.000 13.82
ANISOU  1122 CA   ALA  151 1744    2054    1454   -100  -413 3 96
ATOM    1123 CB   ALA  151 9.739   20.094  29.390 1.000 14.89
ANISOU  1123 CB   ALA  151 1489    2318    1851   22 -269 - 35
ATOM    1124 C    ALA  151 9.792   19.864  31.867 1.000 12.71
ANISOU  1124 C    ALA  151 1448    1463    1920   93 41 4 2 4
ATOM    1125 O    ALA  151 8.655   19.580  32.280 1.000 14.69
ANISOU  1125 O    ALA  151 1535    2114    1932   -242  204   -108
ATOM    1126 N    PHE  152 10.925  19.401  32.410 1.000 11.73
ANISOU  1126 N    PHE  152 1598    1259    1598   120   9   2 71
ATOM    1127 CA   PHE  152 10.890  18.554  33.602 1.000 10.61
ANISOU  1127 CA   PHE  152 1444    1061    1526   -33   34 160
ATOM    1128 CB   PHE  152 12.293  17.981  33.820 1.000 10.23
ANISOU  1128 CB   PHE  152 1317    1132    1437   -144  207   4 10
ATOM    1129 CG   PHE  152 12.517  17.187  35.095 1.000 10.36
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ANISOU 1129 CG   PHE  152 1388     1149     1399     -34   147   2 7 6
ATOM   1130 CD1  PHE  152 12.036   15.896   35.229   1.000 11.24
ANISOU 1130 CD1  PHE  152 1479     1047     1743      114  -103 5 6 6
ATOM   1131 CD2  PHE  152 13.229   17.701   36.154   1.000 11.21
ANISOU 1131 CD2  PHE  152 1489     1449     1319       85 174 1 5 1
ATOM   1132 CE1  PHE  152 12.252   15.163   36.380   1.000 10.80
ANISOU 1132 CE1  PHE  152 1400     1234     1467      249  -111 3 7 3
ATOM   1133 CE2  PHE  152 13.431   16.992   37.341   1.000 11.82
ANISOU 1133 CE2  PHE  152 1709     1622     1160     -276   414   2 5 0
ATOM   1134 CZ   PHE  152 12.932   15.717   37.457   1.000 11.97
ANISOU 1134 CZ   PHE  152 1651     1604     1293     -255   296   1 7 0
ATOM   1135 C    PHE  152 10.430   19.292   34.858   1.000 12.24
ANISOU 1135 C    PHE  152 1754     1168     1730      -10   339   8 4
ATOM   1136 O    PHE  152 9.728    18.729   35.726   1.000 11.49
ANISOU 1136 O    PHE  152 1672     1142     1550      200   109   2 7 7
ATOM   1137 N    LEU  153 10.809   20.575   34.997   1.000 11.86
ANISOU 1137 N    LEU  153 2030     1236     1240      -6 73 1 5 6
ATOM   1138 CA   LEU  153 10.532   21.386   36.155   1.000 11.99
ANISOU 1138 CA   LEU  153 1890     1229     1437     -165   307   8 5
ATOM   1139 CB   LEU  153 11.654   22.420   36.353   1.000 12.81
ANISOU 1139 CB   LEU  153 1691     1381     1794      -72    97 - 4 0
ATOM   1140 CG   LEU  153 13.059   21.910   36.592   1.000 12.87
ANISOU 1140 CG   LEU  153 1762     1645     1483      146   269   6 4
ATOM   1141 CD1  LEU  153 14.027   23.081   36.611   1.000 15.99
ANISOU 1141 CD1  LEU  153 1609     2006     2462      -49   450   - 4 3 1
ATOM   1142 CD2  LEU  153 13.185   21.158   37.914   1.000 19.37
ANISOU 1142 CD2  LEU  153 3091     2462     1806      809   275   5 4 0
ATOM   1143 C    LEU  153 9.179    22.084   36.123   1.000 12.96
ANISOU 1143 C    LEU  153 1728     1253     1943     -336   360   - 4 3
ATOM   1144 O    LEU  153 8.709    22.506   37.193   1.000 13.24
ANISOU 1144 O    LEU  153 1617     1302     2109     -443   481   - 1 8 2
ATOM   1145 N    ASP  154 8.568    22.203   34.955   1.000 13.29
ANISOU 1145 N    ASP  154 1643     1457     1951       60 517 2 8 0
ATOM   1146 CA   ASP  154 7.195    22.671   34.764   1.000 14.21
ANISOU 1146 CA   ASP  154 1862     1255     2280      313   631   6 8 3
ATOM   1147 CB   ASP  154 6.995    23.269   33.373   1.000 18.38
ANISOU 1147 CB   ASP  154 2091     2156     2738      328   728   1 4 7 5
ATOM   1148 CG   ASP  154 5.534    23.367   32.929   1.000 22.95
ANISOU 1148 CG   ASP  154 2323     3543     2855      676   430   1 5 0 1
ATOM   1149 OD1  ASP  154 4.685    23.607   33.820   1.000 20.85
ANISOU 1149 OD1  ASP  154 2164     2368     3389      895   478   1 1 4 4
ATOM   1150 OD2  ASP  154 5.168    23.254   31.702   1.000 24.33
ANISOU 1150 OD2  ASP  154 2989     3146     3110      228    48 1 1 2 8
ATOM   1151 C    ASP  154 6.294    21.455   34.985   1.000 11.22
ANISOU 1151 C    ASP  154 1594     1403     1265      123   147   4 1 0
ATOM   1152 O    ASP  154 6.043    20.729   34.015   1.000 13.31
ANISOU 1152 O    ASP  154 2143     1728     1186      427   219   1 7 0
ATOM   1153 N    CYS  155 5.891    21.220   36.233   1.000 9.91
ANISOU 1153 N    CYS  155 1425     1098     1243      -76   186   2 7
ATOM   1154 CA   CYS  155 5.446    19.881   36.627   1.000 9.41
ANISOU 1154 CA   CYS  155 1294     1168     1115      -13   154   1 7 2
ATOM   1155 CB   CYS  155 6.635    19.171   37.269   1.000 10.64
ANISOU 1155 CB   CYS  155 1276     1015     1753       28 -51 - 1 2 2
ATOM   1156 SG   CYS  155 7.316    19.819   38.797   1.000 12.01
ANISOU 1156 SG   CYS  155 1376     1554     1633     -195  -199 9 5
ATOM   1157 C    CYS  155 4.138    19.885   37.423   1.000 9.66
ANISOU 1157 C    CYS  155 1301     1355     1013      115   146   2 1 6
ATOM   1158 O    CYS  155 3.215    20.645   37.064   1.000 11.61
ANISOU 1158 O    CYS  155 1349     1386     1676      130   116   2 9 4
ATOM   1159 N    GLU  156 4.021    19.033   38.442   1.000 10.26
ANISOU 1159 N    GLU  156 1263     1495     1139      -29   168   2 9 9
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ATOM   1160 CA   GLU   156 2.778   18.787 39.173 1.000 9.04
ANISOU 1160 CA   GLU   156 998  1160      1278    -76   -37 2 3 6
ATOM   1161 CB   GLU   156 2.300   17.391 38.772 1.000 11.63
ANISOU 1161 CB   GLU   156 1187 1348  1885    -67  -135 -1 9 0
ATOM   1162 CG   GLU   156 1.841   17.282 37.326 1.000 14.29
ANISOU 1162 CG   GLU   156 1741 1640  2049   -628  -507 5 0
ATOM   1163 CD   GLU   156 0.502   17.949 37.039 1.000 17.90
ANISOU 1163 CD   GLU   156 1772 2692  2336   -365  -686 1 3 7
ATOM   1164 OE1  GLU   156 -0.220  18.241 38.024 1.000 19.17
ANISOU 1164 OE1  GLU   156 1429 2973  2884   -632  -270 2 5 3
ATOM   1165 OE2  GLU   156 0.136   18.198 35.858 1.000 22.03
ANISOU 1165 OE2  GLU   156 2449 3269  2653   -243  -721 9 2 4
ATOM   1166 C    GLU   156 2.961   18.942 40.677 1.000 9.21
ANISOU 1166 C    GLU   156 1166 1135  1197    -26   239  1 8 3
ATOM   1167 O    GLU   156 2.828   17.997 41.476 1.000 11.22
ANISOU 1167 O    GLU   156 1631 1199  1434    103   162  4 3 1
ATOM   1168 N    PRO   157 3.337   20.158 41.118 1.000 10.29
ANISOU 1168 N    PRO   157 1329 1201  1381   -109    21 1 2 3
ATOM   1169 CD   PRO   157 3.527   21.407 40.359 1.000 10.17
ANISOU 1169 CD   PRO   157 1381 1093  1391    -40   -30  2 1
ATOM   1170 CA   PRO   157 3.618   20.363 42.553 1.000 10.28
ANISOU 1170 CA   PRO   157 1160 1354  1391    -12   -61  6 4
ATOM   1171 CB   PRO   157 4.173   21.805 42.590 1.000 12.44
ANISOU 1171 CB   PRO   157 1832 1567  1330   -397    20 5 8
ATOM   1172 CG   PRO   157 3.475   22.471 41.429 1.000 10.44
ANISOU 1172 CG   PRO   157 1469 1259  1237   -388   166  - 1 5
ATOM   1173 C    PRO   157 2.387   20.269 43.450 1.000 10.83
ANISOU 1173 C    PRO   157 1206 1554  1357    -89   -61  7 6
ATOM   1174 O    PRO   157 1.247   20.422 42.992 1.000 11.38
ANISOU 1174 O    PRO   157 1157 1742  1426    -93   -64  3 3
ATOM   1175 N    LEU   158 2.561   19.988 44.742 1.000 9.91
ANISOU 1175 N    LEU   158 1011 1308  1447    -86   -53  1 5 1
ATOM   1176 CA   LEU   158 1.524   19.940 45.764 1.000 10.85
ANISOU 1176 CA   LEU   158 1319 1461  1344   -387    -2  - 3
ATOM   1177 CB   LEU   158 1.152   18.482 46.078 1.000 11.03
ANISOU 1177 CB   LEU   158 1280 1447  1464   -251    99 9 3
ATOM   1178 CG   LEU   158 0.111   18.239 47.155 1.000 12.01
ANISOU 1178 CG   LEU   158 1271 1497  1795   -303   241  1 2 8
ATOM   1179 CD1  LEU   158 -1.212  18.826 46.736 1.000 16.21
ANISOU 1179 CD1  LEU   158 1224 2249  2685   -111    41 - 2 3 9
ATOM   1180 CD2  LEU   158 -0.086  16.736 47.397 1.000 17.17
ANISOU 1180 CD2  LEU   158 2656 1542  2325   -254  1273 1 7 4
ATOM   1181 C    LEU   158 1.997   20.626 47.048 1.000 11.22
ANISOU 1181 C    LEU   158 1496 1366  1402    110  -304 5
ATOM   1182 O    LEU   158 3.056   20.201 47.539 1.000 11.28
ANISOU 1182 O    LEU   158 1283 1368  1635     20  -262 7 5
ATOM   1183 N    LEU   159 1.234   21.599 47.548 1.000 10.86
ANISOU 1183 N    LEU   159 1103 1744  1278     68  -180  - 7 0
ATOM   1184 CA   LEU   159 1.540   22.278 48.797 1.000 11.62
ANISOU 1184 CA   LEU   159 1247 1761  1407    -59   -68  - 1 8 0
ATOM   1185 CB   LEU   159 1.494   23.802 48.640 1.000 12.44
ANISOU 1185 CB   LEU   159 1624 1747  1354   -209   -73  - 3 3
ATOM   1186 CG   LEU   159 1.633   24.635 49.934 1.000 12.83
ANISOU 1186 CG   LEU   159 1600 1698  1576    246   -54  - 2 1 5
ATOM   1187 CD1  LEU   159 2.947   24.435 50.651 1.000 14.28
ANISOU 1187 CD1  LEU   159 2019 2250  1158    177  -292 1 0 4
ATOM   1188 CD2  LEU   159 1.442   26.134 49.640 1.000 13.33
ANISOU 1188 CD2  LEU   159 1802 1721  1543     87   -87  - 2 0
ATOM   1189 C    LEU   159 0.537   21.846 49.868 1.000 11.24
ANISOU 1189 C    LEU   159 1393 1474  1404   -174    -9  - 2 7 1
ATOM   1190 O    LEU   159 -0.665  21.940 49.620 1.000 13.70
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ANISOU 1190  O   LEU 159 1354     2395      1457     -328  34 -269
ATOM   1191  N   ARG 160 1.013   21.385    51.010   1.000 14.59
ANISOU 1191  N   ARG 160 1737     2569      1239     -390 -128 -224
ATOM   1192  CA  ARG 160 0.158   21.030    52.153   1.000 13.94
ANISOU 1192  CA  ARG 160 1265     2631      1402      157 -137 9 2
ATOM   1193  CB  ARG 160 0.161   19.528    52.343   1.000 18.20
ANISOU 1193  CB  ARG 160 1932     2645      2338     -301  32 193
ATOM   1194  CG  ARG 160 -0.423  18.661    51.252   1.000 25.12
ANISOU 1194  CG  ARG 160 3451     2902      3191     -653 -787 2 3
ATOM   1195  CD  ARG 160 -0.765  17.301    51.831   1.000 31.98
ANISOU 1195  CD  ARG 160 4825     3598      3729    -1994 -905 321
ATOM   1196  NE  ARG 160 -1.284  16.322    50.896   1.000 26.15
ANISOU 1196  NE  ARG 160 3392     2957      3587     -739 -1056 3 10
ATOM   1197  CZ  ARG 160 -0.970  15.044    50.779   1.000 25.30
ANISOU 1197  CZ  ARG 160 3195     3390      3028       94 -785  295
ATOM   1198  NH1 ARG 160 -0.063  14.433    51.552   1.000 31.26
ANISOU 1198  NH1 ARG 160 3654     4142      4080     -629 -1089 2054
ATOM   1199  NH2 ARG 160 -1.572  14.308    49.850   1.000 28.82
ANISOU 1199  NH2 ARG 160 4020     3122      3807      -13 -966 -9 0
ATOM   1200  C   ARG 160 0.649   21.669    53.447   1.000 15.12
ANISOU 1200  C   ARG 160 1649     2863      1232      104  -66  125
ATOM   1201  O   ARG 160 1.804   21.556    53.863   1.000 17.09
ANISOU 1201  O   ARG 160 1291     3411      1791     -400  74 -812
ATOM   1202  N   PHE 161 -0.258  22.369    54.114   1.000 14.95
ANISOU 1202  N   PHE 161 1512     2506      1660     -253  -8 -146
ATOM   1203  CA  PHE 161 -0.036  22.949    55.427   1.000 13.27
ANISOU 1203  CA  PHE 161 1600     1681      1760       -9 -249  - 41
ATOM   1204  CB  PHE 161 -0.587  24.381    55.472   1.000 16.82
ANISOU 1204  CB  PHE 161 1594     1947      2851      384   58 6 4
ATOM   1205  CG  PHE 161 -0.317  25.109    56.771   1.000 22.56
ANISOU 1205  CG  PHE 161 2464     2424      3684      -39  790  -1067
ATOM   1206  CD1 PHE 161 -1.175  25.010    57.849   1.000 26.03
ANISOU 1206  CD1 PHE 161 3353     2919      3620      267 1106 -7 0 2
ATOM   1207  CD2 PHE 161 0.822   25.901    56.885   1.000 25.34
ANISOU 1207  CD2 PHE 161 2353     3265      4011     -179 -161 -7 3 8
ATOM   1208  CE1 PHE 161 -0.943  25.660    59.051   1.000 30.50
ANISOU 1208  CE1 PHE 161 4784     3324      3481     -972 1456 -620
ATOM   1209  CE2 PHE 161 1.061   26.553    58.080   1.000 26.10
ANISOU 1209  CE2 PHE 161 2546     3067      4302     -129  281  -1127
ATOM   1210  CZ  PHE 161 0.199   26.438    59.164   1.000 30.06
ANISOU 1210  CZ  PHE 161 3839     3197      4386     -152  774  - 677
ATOM   1211  C   PHE 161 -0.737  22.073    56.447   1.000 13.93
ANISOU 1211  C   PHE 161 1842     1946      1503     -334 -277 -2 4 0
ATOM   1212  O   PHE 161 -1.916  21.843    56.270   1.000 18.26
ANISOU 1212  O   PHE 161 2000     3277      1662     -744 -399 475
ATOM   1213  N   ARG 162 -0.090  21.631    57.503   1.000 16.29
ANISOU 1213  N   ARG 162 2063     2516      1610     -937 -523 7 7
ATOM   1214  CA  ARG 162 -0.635  20.719    58.483   1.000 15.62
ANISOU 1214  CA  ARG 162 1772     2512      1650     -519 -266 7 6
ATOM   1215  C   ARG 162 -0.476  21.312    59.890   1.000 17.48
ANISOU 1215  C   ARG 162 1855     3131      1656     -603 -186 - 7 6
ATOM   1216  O   ARG 162 0.609   21.734    60.251   1.000 17.23
ANISOU 1216  O   ARG 162 1928     3063      1557     -771  -42  - 160
ATOM   1217  CB  ARG 162 0.081   19.374    58.458   1.000 21.99
ANISOU 1217  CB  ARG 162 3309     2318      2727     -272 -737 -2 2
ATOM   1218  CG  ARG 162 -0.573  18.322    59.348   1.000 26.07
ANISOU 1218  CG  ARG 162 3488     2375      4041      489  655  280
ATOM   1219  CD  ARG 162 -0.231  16.896    58.886   1.000 25.85
ANISOU 1219  CD  ARG 162 3106     2221      4495      418   -2 2 3 9
ATOM   1220  NE  ARG 162 -0.943  15.916    59.698   1.000 28.83
ANISOU 1220  NE  ARG 162 4379     2437      4139     -181  332  -1 7 7
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- 130 -

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ATOM    1221 CZ   ARG  162 -0.642  14.638  59.879 1.000 27.99
ANISOU  1221 CZ   ARG  162 4271    2497    3868    -179   962   8   4
ATOM    1222 NH1  ARG  162  0.429  14.119  59.273 1.000 26.61
ANISOU  1222 NH1  ARG  162 3200    3167    3742     -91  -126  -2  68
ATOM    1223 NH2  ARG  162 -1.408  13.883  60.658 1.000 34.20
ANISOU  1223 NH2  ARG  162 3807    3522    5663    -986   702   7  80
ATOM    1224 N    TYR  163 -1.570  21.296  60.622 1.000 16.77
ANISOU  1224 N    TYR  163 1803    2865    1705    -484  -194  8   4
ATOM    1225 CA   TYR  163 -1.627  21.749  61.997 1.000 16.73
ANISOU  1225 CA   TYR  163 1819    2770    1766    -692   -51   4   0
ATOM    1226 CB   TYR  163 -2.712  22.804  62.116 1.000 18.99
ANISOU  1226 CB   TYR  163 2479    2560    2175    -427  -303  -2  14
ATOM    1227 CG   TYR  163 -3.173  23.206  63.488 1.000 23.52
ANISOU  1227 CG   TYR  163 2573    3821    2544     -16  -335  -8  68
ATOM    1228 CD1  TYR  163 -2.316  23.848  64.367 1.000 31.80
ANISOU  1228 CD1  TYR  163 3613    5005    3466   -1151   304  -23 38
ATOM    1229 CE1  TYR  163 -2.731  24.222  65.625 1.000 40.74
ANISOU  1229 CE1  TYR  163 5855    5676    3950   -1906   976  -31 16
ATOM    1230 CD2  TYR  163 -4.459  22.965  63.931 1.000 32.55
ANISOU  1230 CD2  TYR  163 3307    5654    3408   -1066   639  -23 40
ATOM    1231 CE2  TYR  163 -4.902  23.332  65.189 1.000 42.99
ANISOU  1231 CE2  TYR  163 5626    6630    4080   -2352  1989 -29 49
ATOM    1232 CZ   TYR  163 -4.017  23.960  66.025 1.000 42.52
ANISOU  1232 CZ   TYR  163 6281    5799    4075   -1721  1943 -37 14
ATOM    1233 OH   TYR  163 -4.380  24.351  67.274 1.000 48.87
ANISOU  1233 OH   TYR  163 8167    6831    3569    -269  1801 -30 52
ATOM    1234 C    TYR  163 -1.935  20.551  62.896 1.000 17.90
ANISOU  1234 C    TYR  163 2872    2353    1575    -894  -465  -1 73
ATOM    1235 O    TYR  163 -2.933  19.858  62.653 1.000 18.12
ANISOU  1235 O    TYR  163 2694    2130    2060    -732  -615  6  7
ATOM    1236 N    PHE  164 -1.112  20.326  63.898 1.000 18.32
ANISOU  1236 N    PHE  164 2516    2621    1826    -614  -402  -9  0
ATOM    1237 CA   PHE  164 -1.340  19.381  64.984 1.000 23.44
ANISOU  1237 CA   PHE  164 4176    2692    2038    -727  -669  2  19
ATOM    1238 CB   PHE  164 -0.073  18.617  65.327 1.000 26.02
ANISOU  1238 CB   PHE  164 4594    2824    2470    -459  -822  3  79
ATOM    1239 CG   PHE  164  0.407  17.669  64.231 1.000 29.00
ANISOU  1239 CG   PHE  164 4118    3639    3263    -518  -427  -2 54
ATOM    1240 CD1  PHE  164  1.224  18.118  63.205 1.000 27.11
ANISOU  1240 CD1  PHE  164 3040    4013    3249    -198  -821  4
ATOM    1241 CD2  PHE  164  0.051  16.332  64.240 1.000 28.37
ANISOU  1241 CD2  PHE  164 3935    3139    3704     472    30  -6  4
ATOM    1242 CE1  PHE  164  1.657  17.248  62.223 1.000 28.13
ANISOU  1242 CE1  PHE  164 2730    3926    4034     -43  -229  6
ATOM    1243 CE2  PHE  164  0.459  15.464  63.250 1.000 31.71
ANISOU  1243 CE2  PHE  164 4719    3694    3635    -293   657  -3 83
ATOM    1244 CZ   PHE  164  1.276  15.924  62.234 1.000 30.26
ANISOU  1244 CZ   PHE  164 3827    3808    3862       0   300  1  26
ATOM    1245 C    PHE  164 -1.775  20.160  66.228 1.000 24.65
ANISOU  1245 C    PHE  164 3541    4049    1777   -1025  -455  3  7
ATOM    1246 O    PHE  164 -0.889  20.713  66.885 1.000 25.54
ANISOU  1246 O    PHE  164 3520    4167    2019    -921  -440  -2 57
ATOM    1247 N    PRO  165 -3.058  20.293  66.527 1.000 32.24
ANISOU  1247 N    PRO  165 3641    5095    3513   -1894   266  -6 80
ATOM    1248 CA   PRO  165 -3.486  21.012  67.720 1.000 32.98
ANISOU  1248 CA   PRO  165 3570    5737    3225   -1271   397  -3 22
ATOM    1249 C    PRO  165 -2.854  20.429  68.986 1.000 38.48
ANISOU  1249 C    PRO  165 4355    6808    3457   -1872    40  3  43
ATOM    1250 O    PRO  165 -2.551  19.230  69.034 1.000 53.87
ANISOU  1250 O    PRO  165 9948    7012    3507    -959   692  17 50
ATOM    1251 CB   PRO  165 -5.001  20.820  67.769 1.000 37.76
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ANISOU 1251 CB   PRO  165 3640     6479      4227      -1488 380  -717
ATOM   1252 CG   PRO  165 -5.417   20.048    66.569    1.000 36.16
ANISOU 1252 CG   PRO  165 3341     6449      3948      -518 -349 -398
ATOM   1253 CD   PRO  165 -4.197   19.816    65.734    1.000 35.70
ANISOU 1253 CD   PRO  165 3440     6296      3828      -1656 -5 -604
ATOM   1254 N    LEU  178 4.459    8.087     66.987    1.000 36.23
ANISOU 1254 N    LEU  178 4509     3338      5918      -26 1216 1175
ATOM   1255 CA   LEU  178 4.994    9.117     66.116    1.000 28.63
ANISOU 1255 CA   LEU  178 3397     3170      4312      377 1344 401
ATOM   1256 CB   LEU  178 5.882    8.534     65.027    1.000 30.08
ANISOU 1256 CB   LEU  178 3497     3245      4688      760 752 -620
ATOM   1257 CG   LEU  178 7.245    7.948     65.348    1.000 29.43
ANISOU 1257 CG   LEU  178 3557     2950      4674      667 371 -979
ATOM   1258 CD1  LEU  178 7.859    7.367     64.073    1.000 32.13
ANISOU 1258 CD1  LEU  178 2972     4524      4713      586 810 -790
ATOM   1259 CD2  LEU  178 8.208    8.964     65.937    1.000 41.71
ANISOU 1259 CD2  LEU  178 5303     3695      6850      356 -1656 -1154
ATOM   1260 C    LEU  178 3.885    9.909     65.420    1.000 27.18
ANISOU 1260 C    LEU  178 2107     3534      4686      -175 1776 833
ATOM   1261 O    LEU  178 2.845    9.351     65.086    1.000 39.60
ANISOU 1261 O    LEU  178 2407     4624      8016      -1253 1290 2183
ATOM   1262 N    ARG  179 4.128    11.200    65.160    1.000 25.65
ANISOU 1262 N    ARG  179 2220     3437      4089      -216 878 741
ATOM   1263 CA   ARG  179 3.231    11.973    64.321    1.000 25.04
ANISOU 1263 CA   ARG  179 1860     3289      4365      69 641 1 5
ATOM   1264 C    ARG  179 3.297    11.572    62.852    1.000 24.51
ANISOU 1264 C    ARG  179 2158     2721      4434      39 99 -89
ATOM   1265 O    ARG  179 2.295    11.687    62.139    1.000 28.60
ANISOU 1265 O    ARG  179 2545     3242      5079      441 -332 -256
ATOM   1266 CB   ARG  179 3.517    13.480    64.451    1.000 28.58
ANISOU 1266 CB   ARG  179 3980     3317      3561      -110 -843 5 7
ATOM   1267 CG   ARG  179 2.936    14.092    65.724    1.000 30.01
ANISOU 1267 CG   ARG  179 3817     3725      3862      57 -957 -372
ATOM   1268 CD   ARG  179 3.307    15.570    65.757    1.000 31.51
ANISOU 1268 CD   ARG  179 4457     3675      3840      90 -1514 -338
ATOM   1269 NE   ARG  179 2.925    16.126    67.058    1.000 37.82
ANISOU 1269 NE   ARG  179 7035     3190      4144      153 -310 -1 5
ATOM   1270 CZ   ARG  179 2.897    17.425    67.292    1.000 39.43
ANISOU 1270 CZ   ARG  179 8420     3029      3532      -479 580 400
ATOM   1271 NH1  ARG  179 3.213    18.286    66.331    1.000 59.73
ANISOU 1271 NH1  ARG  179 11745    4676      6273      -1045 3177 1722
ATOM   1272 NH2  ARG  179 2.548    17.896    68.457    1.000 33.13
ANISOU 1272 NH2  ARG  179 5661     3832      3094      275 -1463 -173
ATOM   1273 N    MET  180 4.455    11.099    62.424    1.000 21.43
ANISOU 1273 N    MET  180 2013     2457      3674      -395 108 -222
ATOM   1274 CA   MET  180 4.695    10.539    61.108    1.000 20.07
ANISOU 1274 CA   MET  180 2346     1965      3315      -349 -300 151
ATOM   1275 C    MET  180 5.802    9.482     61.182    1.000 17.33
ANISOU 1275 C    MET  180 2251     2080      2254      -332 -86 3 3 7
ATOM   1276 O    MET  180 6.894    9.757     61.677    1.000 18.52
ANISOU 1276 O    MET  180 2237     2019      2781      -398 -79 5 2
ATOM   1277 CB   MET  180 5.041    11.646    60.136    1.000 22.64
ANISOU 1277 CB   MET  180 2571     2321      3709      -197 -549 683
ATOM   1278 CG   MET  180 5.065    11.367    58.678    1.000 27.90
ANISOU 1278 CG   MET  180 3918     3095      3588      -453 -654 913
ATOM   1279 SD   MET  180 4.945    12.838    57.629    1.000 25.01
ANISOU 1279 SD   MET  180 2936     2942      3626      -399 124 851
ATOM   1280 CE   MET  180 4.385    12.010    56.147    1.000 37.00
ANISOU 1280 CE   MET  180 5917     3450      4690      -258 -2680 1204
ATOM   1281 N    ALA  181 5.467    8.295     60.680    1.000 16.99
ANISOU 1281 N    ALA  181 2144     2139      2174      -90 -558 299
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- 132 -

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ATOM    1282 CA  ALA 181 6.396    7.168    60.676 1.000 16.12
ANISOU  1282 CA  ALA 181 2275    1958     1890    -171 -343 6 0 2
ATOM    1283 CB  ALA 181 5.668    5.891    60.279 1.000 20.24
ANISOU  1283 CB  ALA 181 2857    2158     2673    -648  694  1 0 6
ATOM    1284 C   ALA 181 7.576    7.409    59.738 1.000 15.43
ANISOU  1284 C   ALA 181 2223    1717     1925    -315 -369 4 3 2
ATOM    1285 O   ALA 181 7.458    8.198    58.783 1.000 15.49
ANISOU  1285 O   ALA 181 2268    1761     1858    -173 -296 4 3 4
ATOM    1286 N   PRO 182 8.698    6.733    59.986 1.000 16.03
ANISOU  1286 N   PRO 182 2517    1745     1829    32 -78 5 3 1
ATOM    1287 CD  PRO 182 8.983    5.802    61.101 1.000 19.61
ANISOU  1287 CD  PRO 182 2321    2908     2221    -210 -306 12 4 0
ATOM    1288 CA  PRO 182 9.865    6.907    59.076 1.000 14.78
ANISOU  1288 CA  PRO 182 2573    1336     1706    -101 -86  2 9 9
ATOM    1289 CB  PRO 182 10.914   5.948    59.649 1.000 16.20
ANISOU  1289 CB  PRO 182 2570    1978     1607    170 -251 7 7
ATOM    1290 CG  PRO 182 10.479   5.713    61.066 1.000 19.28
ANISOU  1290 CG  PRO 182 2301    3071     1952    -199 -245 10 0 1
ATOM    1291 C   PRO 182 9.541    6.571    57.627 1.000 14.90
ANISOU  1291 C   PRO 182 2230    1658     1772    -421 -262 3 4 0
ATOM    1292 O   PRO 182 8.920    5.573    57.249 1.000 15.38
ANISOU  1292 O   PRO 182 2301    1587     1957    -467 -482 5 3 9
ATOM    1293 N   HIS 183 9.969    7.460    56.730 1.000 12.28
ANISOU  1293 N   HIS 183 1737    1312     1617    -154 -284 15 6
ATOM    1294 CA  HIS 183 9.733    7.354    55.300 1.000 11.90
ANISOU  1294 CA  HIS 183 1413    1495     1614    -254 -351 3 5
ATOM    1295 CB  HIS 183 8.300    7.824    54.922 1.000 12.43
ANISOU  1295 CB  HIS 183 1399    1368     1957    -128 -241 11 2
ATOM    1296 CG  HIS 183 8.168    9.314    55.089 1.000 11.36
ANISOU  1296 CG  HIS 183 1349    1369     1600    -367 -296 5 6
ATOM    1297 CD2 HIS 183 8.259    10.374   54.249 1.000 12.03
ANISOU  1297 CD2 HIS 183 1684    1296     1589    -43   157  - 1 0
ATOM    1298 ND1 HIS 183 7.989    9.858    56.339 1.000 13.27
ANISOU  1298 ND1 HIS 183 1901    1439     1700    -65   267  1 9 3
ATOM    1299 CE1 HIS 183 7.943    11.187   56.244 1.000 12.43
ANISOU  1299 CE1 HIS 183 1939    1490     1296    77 -244  15 0
ATOM    1300 NE2 HIS 183 8.101    11.515   54.992 1.000 11.04
ANISOU  1300 NE2 HIS 183 1560    1437     1199    215   -232 4 8
ATOM    1301 C   HIS 183 10.749   8.176    54.515 1.000 12.27
ANISOU  1301 C   HIS 183 1446    1639     1577    -303 -282 - 6 7
ATOM    1302 O   HIS 183 11.433   9.032    55.064 1.000 12.94
ANISOU  1302 O   HIS 183 1496    1915     1505    -558 -292 1 5
ATOM    1303 N   TYR 184 10.849   7.907    53.215 1.000 10.61
ANISOU  1303 N   TYR 184 1453    1027     1552    -41   -380 110
ATOM    1304 CA  TYR 184 11.483   8.800    52.256 1.000 11.36
ANISOU  1304 CA  TYR 184 1475    1104     1738    -71   -264 17 8
ATOM    1305 CB  TYR 184 12.628   8.151    51.481 1.000 11.79
ANISOU  1305 CB  TYR 184 1631    1114     1734    -62   -197 3 4
ATOM    1306 CG  TYR 184 12.368   6.907    50.677 1.000 11.29
ANISOU  1306 CG  TYR 184 1680    921  1688     225   -893 17 4
ATOM    1307 CD1 TYR 184 12.156   5.659    51.268 1.000 11.76
ANISOU  1307 CD1 TYR 184 1663    927  1879     388   -487 19 0
ATOM    1308 CE1 TYR 184 11.911   4.526    50.492 1.000 12.64
ANISOU  1308 CE1 TYR 184 1960    878  1964     173   -40 18 2
ATOM    1309 CD2 TYR 184 12.333   6.949    49.279 1.000 11.13
ANISOU  1309 CD2 TYR 184 1252    1302     1674    109   -283 9 3
ATOM    1310 CE2 TYR 184 12.102   5.834    48.502 1.000 12.93
ANISOU  1310 CE2 TYR 184 1944    1422     1546    49 -384  7 3
ATOM    1311 CZ  TYR 184 11.898   4.611    49.121 1.000 13.14
ANISOU  1311 CZ  TYR 184 1717    1304     1972    30 -611  6 7
ATOM    1312 OH  TYR 184 11.663   3.490    48.343 1.000 15.45
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ANISOU 1312 OH  TYR  184 2028    1471    2373    42 -476  - 2 4 7
ATOM   1313 C   TYR  184 10.447  9.390   51.314 1.000 11.50
ANISOU 1313 C   TYR  184 1445    1215    1709   -187 -201 3 4 8
ATOM   1314 O   TYR  184 9.362   8.797   51.089 1.000 11.75
ANISOU 1314 O   TYR  184 1305    1308    1853   -106 -171 4 2 7
ATOM   1315 N   ASP  185 10.784  10.557  50.743 1.000 10.79
ANISOU 1315 N   ASP  185 1581    1069    1449   -141 -132 1 1 8
ATOM   1316 CA  ASP  185 9.861   11.218  49.815 1.000 9.10
ANISOU 1316 CA  ASP  185 1089    1093    1277   -326  23  2 0 6
ATOM   1317 CB  ASP  185 9.934   12.743  49.886 1.000 10.13
ANISOU 1317 CB  ASP  185 1427    1095    1327   -298 -178 1 7 7
ATOM   1318 CG  ASP  185 9.540   13.388  51.185 1.000 11.79
ANISOU 1318 CG  ASP  185 1797    1350    1333   -250 -149 1 1
ATOM   1319 OD1 ASP  185 9.681   14.638  51.278 1.000 13.79
ANISOU 1319 OD1 ASP  185 2050    1316    1875    135  -52  - 2 6
ATOM   1320 OD2 ASP  185 9.114   12.755  52.189 1.000 13.31
ANISOU 1320 OD2 ASP  185 1805    1848    1405   -411  -63  1 0 5
ATOM   1321 C   ASP  185 10.098  10.759  48.371 1.000 9.44
ANISOU 1321 C   ASP  185 1036    1150    1401   -309  -26  1 0 0
ATOM   1322 O   ASP  185 11.234  10.469  48.005 1.000 10.64
ANISOU 1322 O   ASP  185 1167    1376    1500   -127  -35  - 2 0 6
ATOM   1323 N   LEU  186 9.038   10.684  47.568 1.000 10.09
ANISOU 1323 N   LEU  186 1211    1186    1437   -272 -177 - 5 8
ATOM   1324 CA  LEU  186 9.124   10.312  46.161 1.000 10.60
ANISOU 1324 CA  LEU  186 1641    986     1401   -239  -52  - 4 4
ATOM   1325 CB  LEU  186 8.030   9.295   45.798 1.000 11.32
ANISOU 1325 CB  LEU  186 1652    929     1721   -111   17  - 4 7 9
ATOM   1326 CG  LEU  186 7.989   7.977   46.602 1.000 12.60
ANISOU 1326 CG  LEU  186 1408    1039    2340   -263 -200 -1 6 6
ATOM   1327 CD1 LEU  186 6.896   7.064   46.028 1.000 16.64
ANISOU 1327 CD1 LEU  186 1900    1373    3049   -634 -398 - 1 3 5
ATOM   1328 CD2 LEU  186 9.356   7.332   46.629 1.000 13.84
ANISOU 1328 CD2 LEU  186 1438    1245    2575   -155  443  2 8 3
ATOM   1329 C   LEU  186 9.024   11.521  45.223 1.000 10.90
ANISOU 1329 C   LEU  186 1327    1211    1603    -3  -451  1 6 4
ATOM   1330 O   LEU  186 8.768   11.406  44.031 1.000 13.60
ANISOU 1330 O   LEU  186 2067    1608    1494   -211 -321 1 0 3
ATOM   1331 N   SER  187 9.264   12.705  45.734 1.000 10.71
ANISOU 1331 N   SER  187 1546    1129    1393    -76  -282 3 1 8
ATOM   1332 CA  SER  187 9.401   13.943  44.998 1.000 10.49
ANISOU 1332 CA  SER  187 1427    1191    1370    195  -107 4 8 8
ATOM   1333 CB  SER  187 9.221   15.103  46.002 1.000 10.56
ANISOU 1333 CB  SER  187 1105    1048    1857    298   161  5 3 2
ATOM   1334 OG  SER  187 10.430  14.918  46.726 1.000 13.01
ANISOU 1334 OG  SER  187 1343    1432    2169   -132  -295 2 0 1
ATOM   1335 C   SER  187 10.774  14.062  44.336 1.000 10.47
ANISOU 1335 C   SER  187 1447    862     1669    135   -3  1 4 5
ATOM   1336 O   SER  187 11.684  13.246  44.513 1.000 10.54
ANISOU 1336 O   SER  187 1577    799     1629    183   -91  - 7 7
ATOM   1337 N   MET  188 10.962  15.095  43.502 1.000 9.78
ANISOU 1337 N   MET  188 1419    978     1318    147   44  7 4
ATOM   1338 CA  MET  188 12.267  15.584  43.065 1.000 9.94
ANISOU 1338 CA  MET  188 1394    942     1441    182   58  3 7
ATOM   1339 CB  MET  188 12.128  16.543  41.891 1.000 10.89
ANISOU 1339 CB  MET  188 1523    840     1774    98  48 2 2 7
ATOM   1340 CG  MET  188 13.385  17.258  41.470 1.000 11.40
ANISOU 1340 CG  MET  188 1403    1172    1756    46  -51 2 1 4
ATOM   1341 SD  MET  188 14.687  16.134  40.891 1.000 12.71
ANISOU 1341 SD  MET  188 1619    1272    1940    139   137  1 9 8
ATOM   1342 CE  MET  188 16.061  17.267  40.790 1.000 13.86
ANISOU 1342 CE  MET  188 1862    1399    2003    -2 911 - 9 0
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ATOM   1343 C    MET 188 12.946 16.217 44.291 1.000 12.13
ANISOU 1343 C    MET 188 1325   1586   1698    169  -18  -2 8 5
ATOM   1344 O    MET 188 13.971 15.727 44.804 1.000 11.52
ANISOU 1344 O    MET 188 1288   1553   1535    144  132   8 7
ATOM   1345 N    VAL 189 12.362 17.290 44.838 1.000 10.00
ANISOU 1345 N    VAL 189 1290   1217   1292     53 -175   6
ATOM   1346 CA   VAL 189 12.745 17.894 46.099 1.000 9.70
ANISOU 1346 CA   VAL 189 1209   1057   1420   -212  -45  -1 9
ATOM   1347 CB   VAL 189 13.618 19.154 45.979 1.000 9.97
ANISOU 1347 CB   VAL 189 1288   1103   1398   -238  129  18 9
ATOM   1348 CG1  VAL 189 14.953 18.837 45.266 1.000 13.45
ANISOU 1348 CG1  VAL 189 1334   1410   2368   -236  390  14 3
ATOM   1349 CG2  VAL 189 12.899 20.289 45.264 1.000 12.24
ANISOU 1349 CG2  VAL 189 1715   1242   1693    -25  150  29 5
ATOM   1350 C    VAL 189 11.469 18.245 46.871 1.000 10.10
ANISOU 1350 C    VAL 189 1089   1600   1149   -456 -156 -7 3
ATOM   1351 O    VAL 189 10.405 18.399 46.250 1.000 9.53
ANISOU 1351 O    VAL 189 1153   1249   1217   -222 -190  8
ATOM   1352 N    THR 190 11.609 18.327 48.187 1.000 8.66
ANISOU 1352 N    THR 190 1273    894   1123     15 -202  12 7
ATOM   1353 CA   THR 190 10.565 18.771 49.091 1.000 9.64
ANISOU 1353 CA   THR 190 1350   1167   1147    -11 -228 -9 9
ATOM   1354 CB   THR 190 10.194 17.699 50.132 1.000 10.69
ANISOU 1354 CB   THR 190 1231   1196   1635   -300  121  -5 4
ATOM   1355 OG1  THR 190 9.662  16.586 49.501 1.000 12.45
ANISOU 1355 OG1  THR 190 1333   1341   2055   -140 -258 -4 8
ATOM   1356 CG2  THR 190 9.038  18.131 51.019 1.000 13.59
ANISOU 1356 CG2  THR 190 1121   2222   1821   -272  151  -19 5
ATOM   1357 C    THR 190 11.058 19.976 49.891 1.000 9.23
ANISOU 1357 C    THR 190 1257   1096   1152   -102 -336 -4 9
ATOM   1358 O    THR 190 12.149 19.867 50.447 1.000 10.54
ANISOU 1358 O    THR 190 1322   1292   1390     -5 -359  -12 2
ATOM   1359 N    LEU 191 10.313 21.064 49.978 1.000 10.23
ANISOU 1359 N    LEU 191 1319   1167   1401    -71 -177 -13 3
ATOM   1360 CA   LEU 191 10.691 22.241 50.770 1.000 10.19
ANISOU 1360 CA   LEU 191 1259   1176   1438      0 -294  -14 2
ATOM   1361 CB   LEU 191 10.604 23.511 49.910 1.000 11.52
ANISOU 1361 CB   LEU 191 1203   1185   1990   -118 -601 3 2
ATOM   1362 CG   LEU 191 11.897 23.898 49.167 1.000 13.23
ANISOU 1362 CG   LEU 191 1898   1710   1419   -391 -358 9 7
ATOM   1363 CD1  LEU 191 12.333 22.794 48.218 1.000 15.25
ANISOU 1363 CD1  LEU 191 1685   2018   2091   -476 -214 -3 0 5
ATOM   1364 CD2  LEU 191 11.717 25.231 48.448 1.000 17.46
ANISOU 1364 CD2  LEU 191 2310   2044   2281    -14   17 6 0 4
ATOM   1365 C    LEU 191 9.798  22.328 52.006 1.000 11.93
ANISOU 1365 C    LEU 191 1275   1677   1579     56 -190  -3 7 2
ATOM   1366 O    LEU 191 8.560  22.262 51.868 1.000 13.49
ANISOU 1366 O    LEU 191 1276   2173   1676      1 -192  -6 0 1
ATOM   1367 N    ILE 192 10.394 22.483 53.190 1.000 11.06
ANISOU 1367 N    ILE 192 1115   1603   1487   -111  -92  -1 0 8
ATOM   1368 CA   ILE 192 9.671  22.539 54.443 1.000 11.13
ANISOU 1368 CA   ILE 192 1071   1638   1521     11 -173  -1 4 9
ATOM   1369 CB   ILE 192 9.927  21.304 55.330 1.000 12.94
ANISOU 1369 CB   ILE 192 2099   1586   1232    -65   -9 -2 3 3
ATOM   1370 CG2  ILE 192 9.221  21.428 56.673 1.000 16.06
ANISOU 1370 CG2  ILE 192 2479   1983   1641   -206  426  -2 1 5
ATOM   1371 CG1  ILE 192 9.512  20.028 54.590 1.000 15.51
ANISOU 1371 CG1  ILE 192 2633   1658   1601   -400  -48  -1 7 5
ATOM   1372 CD1  ILE 192 9.845  18.765 55.339 1.000 25.71
ANISOU 1372 CD1  ILE 192 5869   1608   2290   -175 -1566 -3 0 1
ATOM   1373 C    ILE 192 9.966  23.809 55.253 1.000 11.47
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ANISOU 1373 C    ILE  192 1330     1603     1427     -4 -222  -122
ATOM   1374 O    ILE  192 11.123   24.106   55.567   1.000 13.33
ANISOU 1374 O    ILE  192 1344     1738     1981     -96  -289 -219
ATOM   1375 N    GLN  193 8.904    24.525   55.602   1.000 15.78
ANISOU 1375 N    GLN  193 1316     2462     2219     -64  -5 -975
ATOM   1376 CA   GLN  193 8.987    25.653   56.533   1.000 14.56
ANISOU 1376 CA   GLN  193 1582     1858     2091     212  -304 -529
ATOM   1377 CB   GLN  193 8.449    26.975   56.020   1.000 20.03
ANISOU 1377 CB   GLN  193 2226     2203     3180     318  -329 142
ATOM   1378 CG   GLN  193 9.203    27.684   54.914   1.000 23.86
ANISOU 1378 CG   GLN  193 3399     2492     3174     313  45 280
ATOM   1379 CD   GLN  193 8.665    29.079   54.675   1.000 22.92
ANISOU 1379 CD   GLN  193 3250     2363     3097     78 -477  205
ATOM   1380 OE1  GLN  193 7.603    29.292   54.099   1.000 27.68
ANISOU 1380 OE1  GLN  193 4175     3310     3031     552  -1214 2 9
ATOM   1381 NE2  GLN  193 9.411    30.075   55.134   1.000 27.01
ANISOU 1381 NE2  GLN  193 3187     2667     4408     -440 124  1 7
ATOM   1382 C    GLN  193 8.216    25.265   57.804   1.000 15.14
ANISOU 1382 C    GLN  193 1945     1827     1982     136  -174 -722
ATOM   1383 O    GLN  193 7.147    24.662   57.714   1.000 27.80
ANISOU 1383 O    GLN  193 2523     6225     1817     -1586 -592 235
ATOM   1384 N    GLN  194 8.714    25.552   58.978   1.000 19.80
ANISOU 1384 N    GLN  194 2994     2502     2025     -632 -752 3 3
ATOM   1385 CA   GLN  194 8.100    25.080   60.213   1.000 22.89
ANISOU 1385 CA   GLN  194 3961     2626     2110     493  -20  5 2
ATOM   1386 C    GLN  194 7.763    26.236   61.141   1.000 27.79
ANISOU 1386 C    GLN  194 4886     2757     2916     823  25 -262
ATOM   1387 O    GLN  194 8.424    27.258   60.983   1.000 30.03
ANISOU 1387 O    GLN  194 4727     3168     3516     368  -259 -910
ATOM   1388 CB   GLN  194 9.086    24.170   60.950   1.000 23.97
ANISOU 1388 CB   GLN  194 3952     3133     2021     846  483  3 5 2
ATOM   1389 CG   GLN  194 9.398    22.835   60.314   1.000 21.94
ANISOU 1389 CG   GLN  194 2740     3238     2358     683  -182 -1 0
ATOM   1390 CD   GLN  194 10.546   22.148   61.052   1.000 20.51
ANISOU 1390 CD   GLN  194 2450     3433     1911     509  -321 -429
ATOM   1391 OE1  GLN  194 11.707   22.142   60.627   1.000 20.80
ANISOU 1391 OE1  GLN  194 2245     2996     2662     -171 -382 -681
ATOM   1392 NE2  GLN  194 10.223   21.585   62.197   1.000 24.91
ANISOU 1392 NE2  GLN  194 2539     3902     3023     210  -365 760
ATOM   1393 N    THR  195 6.817    26.035   62.030   1.000 32.47
ANISOU 1393 N    THR  195 5716     2729     3891     1095 1056 -616
ATOM   1394 CA   THR  195 6.588    26.708   63.282   1.000 35.83
ANISOU 1394 CA   THR  195 6329     3539     3748     1011 999  -722
ATOM   1395 CB   THR  195 5.263    27.492   63.357   1.000 37.96
ANISOU 1395 CB   THR  195 5756     4304     4365     647  2095 -1151
ATOM   1396 OG1  THR  195 4.191    26.576   63.604   1.000 48.36
ANISOU 1396 OG1  THR  195 6874     6076     5423     -806 2581 -1842
ATOM   1397 CG2  THR  195 4.958    28.175   62.033   1.000 44.54
ANISOU 1397 CG2  THR  195 2944     7471     6510     -872 -963 621
ATOM   1398 C    THR  195 6.590    25.684   64.429   1.000 48.86
ANISOU 1398 C    THR  195 10133    4924     3508     -321 -1356 -2 2 1
ATOM   1399 O    THR  195 6.122    24.544   64.293   1.000 64.12
ANISOU 1399 O    THR  195 13267    4150     6945     -264 -4541 1682
ATOM   1400 N    PHE  201 12.035   21.374   72.205   1.000 71.12
ANISOU 1400 N    PHE  201 13961    9034     4028     -5932 -1658 -1741
ATOM   1401 CA   PHE  201 11.775   20.053   71.629   1.000 49.44
ANISOU 1401 CA   PHE  201 7918     7543     3326     -3128 1317 -1488
ATOM   1402 CB   PHE  201 10.469   19.464   72.181   1.000 47.85
ANISOU 1402 CB   PHE  201 7119     6892     4168     -1869 1937 -1899
ATOM   1403 CG   PHE  201 10.130   18.113   71.545   1.000 46.41
ANISOU 1403 CG   PHE  201 6643     6596     4396     -2038 1879 -1497
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ATOM    1404 CD1 PHE  201 10.738  16.954  71.991  1.000 50.03
ANISOU  1404 CD1 PHE  201 7982    6634    4393    -2326 1092 -991
ATOM    1405 CD2 PHE  201 9.220   18.001  70.513  1.000 42.63
ANISOU  1405 CD2 PHE  201 5458    6427    4313    -1097 2449 -2268
ATOM    1406 CE1 PHE  201 10.434  15.739  71.417  1.000 49.95
ANISOU  1406 CE1 PHE  201 8275    6464    4240    -2047 227  -716
ATOM    1407 CE2 PHE  201 8.901   16.783  69.934  1.000 41.38
ANISOU  1407 CE2 PHE  201 6016    5946    3762    -578  2006 -1844
ATOM    1408 CZ  PHE  201 9.515   15.636  70.392  1.000 44.74
ANISOU  1408 CZ  PHE  201 7075    6261    3663    -1063 1020 -975
ATOM    1409 C   PHE  201 11.722  20.110  70.107  1.000 42.42
ANISOU  1409 C   PHE  201 6324    6442    3351    -1964 717  -1441
ATOM    1410 O   PHE  201 11.007  20.941  69.536  1.000 47.79
ANISOU  1410 O   PHE  201 9668    4400    4090    -762  691  -2416
ATOM    1411 N   VAL  202 12.477  19.232  69.449  1.000 34.04
ANISOU  1411 N   VAL  202 4525    5852    2558    -1948 7    -425
ATOM    1412 CA  VAL  202 12.535  19.245  67.993  1.000 25.09
ANISOU  1412 CA  VAL  202 3221    3752    2558    -1041 -182 9 9
ATOM    1413 CB  VAL  202 13.988  19.286  67.489  1.000 22.88
ANISOU  1413 CB  VAL  202 2832    3430    2432    -577  -691 -198
ATOM    1414 CG1 VAL  202 14.053  19.387  65.965  1.000 26.02
ANISOU  1414 CG1 VAL  202 3821    3594    2470    -958  35   -277
ATOM    1415 CG2 VAL  202 14.771  20.443  68.078  1.000 24.69
ANISOU  1415 CG2 VAL  202 3043    3473    2867    -786  -410 -320
ATOM    1416 C   VAL  202 11.798  18.035  67.421  1.000 20.69
ANISOU  1416 C   VAL  202 3027    2810    2023    -648  58   615
ATOM    1417 O   VAL  202 12.288  16.914  67.581  1.000 26.08
ANISOU  1417 O   VAL  202 3294    3219    3396    -136  452  884
ATOM    1418 N   SER  203 10.662  18.234  66.766  1.000 20.21
ANISOU  1418 N   SER  203 3100    2794    1787    -414  25   -152
ATOM    1419 CA  SER  203 9.820   17.192  66.218  1.000 20.37
ANISOU  1419 CA  SER  203 3149    2709    1884    -355  129  -256
ATOM    1420 CB  SER  203 8.437   17.779  65.896  1.000 24.72
ANISOU  1420 CB  SER  203 2726    4106    2558    -178  369  -1015
ATOM    1421 OG  SER  203 7.841   18.239  67.097  1.000 31.80
ANISOU  1421 OG  SER  203 3328    5782    2974    -457  1175 -1104
ATOM    1422 C   SER  203 10.367  16.524  64.958  1.000 19.13
ANISOU  1422 C   SER  203 2580    2647    2040    -339  170  -244
ATOM    1423 O   SER  203 10.279  15.302  64.832  1.000 17.01
ANISOU  1423 O   SER  203 2311    2625    1527    -414  206  -18
ATOM    1424 N   LEU  204 10.902  17.259  63.998  1.000 16.16
ANISOU  1424 N   LEU  204 2142    1976    2024    71 77 -292
ATOM    1425 CA  LEU  204 11.403  16.679  62.740  1.000 14.07
ANISOU  1425 CA  LEU  204 1670    1626    2049    -22   -24  -283
ATOM    1426 CB  LEU  204 11.269  17.704  61.618  1.000 13.80
ANISOU  1426 CB  LEU  204 1549    1763    1931    -249  -340 -277
ATOM    1427 CG  LEU  204 11.647  17.272  60.212  1.000 14.13
ANISOU  1427 CG  LEU  204 1726    1722    1919    -253  -482 -412
ATOM    1428 CD1 LEU  204 10.770  16.134  59.680  1.000 18.76
ANISOU  1428 CD1 LEU  204 2579    2895    1654    -1297 -927 -106
ATOM    1429 CD2 LEU  204 11.609  18.478  59.255  1.000 16.20
ANISOU  1429 CD2 LEU  204 1987    2095    2074    65 75 -123
ATOM    1430 C   LEU  204 12.832  16.140  62.885  1.000 14.81
ANISOU  1430 C   LEU  204 1734    1748    2144    9  -199 -250
ATOM    1431 O   LEU  204 13.699  16.853  63.397  1.000 15.52
ANISOU  1431 O   LEU  204 1833    1789    2274    -59   -435 -42
ATOM    1432 N   GLN  205 13.065  14.900  62.469  1.000 14.42
ANISOU  1432 N   GLN  205 1847    1804    1827    189   -120 -153
ATOM    1433 CA  GLN  205 14.288  14.143  62.574  1.000 12.76
ANISOU  1433 CA  GLN  205 1777    1655    1419    43 -347 -113
ATOM    1434 C   GLN  205 14.622  13.434  61.260  1.000 11.12
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ANISOU 1434 C    GLN  205 1412     1474     1338      49 -468  - 2 1
ATOM   1435 O    GLN  205 13.707   12.927   60.606   1.000 13.97
ANISOU 1435 O    GLN  205 1622     2235     1449    -293 -449 -147
ATOM   1436 CB   GLN  205 14.164   13.062   63.662   1.000 15.57
ANISOU 1436 CB   GLN  205 2421     1925     1568     341  151  8 3
ATOM   1437 CG   GLN  205 13.863   13.635   65.032   1.000 18.58
ANISOU 1437 CG   GLN  205 3321     2286     1451     689 -129 8 2
ATOM   1438 CD   GLN  205 15.086   14.243   65.680   1.000 24.33
ANISOU 1438 CD   GLN  205 3687     3465     2091     520 -499 -570
ATOM   1439 OE1  GLN  205 16.206   13.717   65.549   1.000 29.12
ANISOU 1439 OE1  GLN  205 3350     3464     4251      14 -270 -1800
ATOM   1440 NE2  GLN  205 14.840   15.356   66.378   1.000 23.01
ANISOU 1440 NE2  GLN  205 3055     2465     3225     335 -592 -140
ATOM   1441 N    ALA  206 15.893   13.401   60.893   1.000 12.63
ANISOU 1441 N    ALA  206 1523     1770     1506    -251 -234 - 6
ATOM   1442 CA   ALA  206 16.335   12.649   59.731   1.000 13.77
ANISOU 1442 CA   ALA  206 1392     2099     1742    -522  -72  -2 9 5
ATOM   1443 CB   ALA  206 16.693   13.519   58.528   1.000 16.34
ANISOU 1443 CB   ALA  206 2034     2494     1682    -603  123  -2 7 7
ATOM   1444 C    ALA  206 17.567   11.813   60.046   1.000 15.92
ANISOU 1444 C    ALA  206 1489     2331     2230    -290  179  - 3 4 1
ATOM   1445 O    ALA  206 18.368   12.182   60.908   1.000 15.86
ANISOU 1445 O    ALA  206 1877     1772     2377     150 -356 3 0
ATOM   1446 N    GLU  207 17.707   10.712   59.305   1.000 16.98
ANISOU 1446 N    GLU  207 1981     2086     2383    -335  348  -1 8 6
ATOM   1447 CA   GLU  207 18.938    9.942   59.364   1.000 20.58
ANISOU 1447 CA   GLU  207 2198     1938     3684    -164  490  - 1 0
ATOM   1448 C    GLU  207 20.082   10.688   58.681   1.000 18.75
ANISOU 1448 C    GLU  207 1828     2037     3260     272  185  5 5 8
ATOM   1449 O    GLU  207 19.948   10.953   57.503   1.000 18.23
ANISOU 1449 O    GLU  207 1746     2145     3034      52 8  - 45
ATOM   1450 CB   GLU  207 18.665    8.612   58.676   1.000 25.81
ANISOU 1450 CB   GLU  207 3289     1794     4724     -19   83 -135
ATOM   1451 CG   GLU  207 19.879    7.737   58.429   1.000 30.08
ANISOU 1451 CG   GLU  207 4102     2221     5105     907 -948 -5 4 6
ATOM   1452 CD   GLU  207 19.429    6.356   57.959   1.000 29.93
ANISOU 1452 CD   GLU  207 5549     2024     3798    1179 -2099 -1 2 3
ATOM   1453 OE1  GLU  207 19.491    5.471   58.839   1.000 35.14
ANISOU 1453 OE1  GLU  207 5782     2692     4879     938 -931 8 8 5
ATOM   1454 OE2  GLU  207 19.037    6.251   56.762   1.000 38.62
ANISOU 1454 OE2  GLU  207 4955     5608     4109     135 -2494 - 3 6 6
ATOM   1455 N    VAL  208 21.146   10.997   59.414   1.000 16.97
ANISOU 1455 N    VAL  208 1926     1974     2549     120  337  8 0 7
ATOM   1456 CA   VAL  208 22.376   11.593   58.902   1.000 17.77
ANISOU 1456 CA   VAL  208 1894     2109     2748      93 500 4 1 1
ATOM   1457 CB   VAL  208 22.455   13.111   59.155   1.000 16.89
ANISOU 1457 CB   VAL  208 2774     2148     1494    -372 -149 5 6 9
ATOM   1458 CG1  VAL  208 23.652   13.688   58.409   1.000 20.76
ANISOU 1458 CG1  VAL  208 3214     2150     2526    -423  647  1 4 8
ATOM   1459 CG2  VAL  208 21.172   13.815   58.720   1.000 16.36
ANISOU 1459 CG2  VAL  208 3146     1640     1431      25 98 3 5 3
ATOM   1460 C    VAL  208 23.585   10.877   59.507   1.000 20.29
ANISOU 1460 C    VAL  208 1936     2555     3217      11 -58 1 3 2
ATOM   1461 O    VAL  208 23.726   10.829   60.741   1.000 20.74
ANISOU 1461 O    VAL  208 2436     2256     3187     460  206  5 4 4
ATOM   1462 N    GLY  209 24.457   10.295   58.672   1.000 18.94
ANISOU 1462 N    GLY  209 1764     2445     2989     211 -494 1 5
ATOM   1463 CA   GLY  209 25.558    9.508   59.194   1.000 24.01
ANISOU 1463 CA   GLY  209 2171     3040     3910     549 -396 7 0 9
ATOM   1464 C    GLY  209 25.123    8.364   60.082   1.000 25.00
ANISOU 1464 C    GLY  209 2874     3156     3470    1406  772  6 4 9
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ATOM   1465 O   GLY 209 25.850  7.934  60.991 1.000 35.98
ANISOU 1465 O   GLY 209 4448   3946   5279   1425  -426 1769
ATOM   1466 N   GLY 210 23.951  7.786  59.869 1.000 25.89
ANISOU 1466 N   GLY 210 3802   2756   3278   523   899  749
ATOM   1467 CA  GLY 210 23.477  6.678  60.671 1.000 26.43
ANISOU 1467 CA  GLY 210 4479   2136   3427   1228  742  912
ATOM   1468 C   GLY 210 22.885  7.025  62.016 1.000 28.45
ANISOU 1468 C   GLY 210 5472   2099   3237   831   1029 1175
ATOM   1469 O   GLY 210 22.634  6.098  62.789 1.000 40.26
ANISOU 1469 O   GLY 210 7322   2719   5256   1881  2759 2360
ATOM   1470 N   ALA 211 22.651  8.281  62.338 1.000 25.78
ANISOU 1470 N   ALA 211 4671   2359   2763   1370  724  1197
ATOM   1471 CA  ALA 211 22.048  8.671  63.613 1.000 23.74
ANISOU 1471 CA  ALA 211 2966   3156   2896   727   339  663
ATOM   1472 CB  ALA 211 23.093  9.333  64.496 1.000 29.57
ANISOU 1472 CB  ALA 211 2957   4372   3906   834   -96  69
ATOM   1473 C   ALA 211 20.900  9.626  63.360 1.000 21.19
ANISOU 1473 C   ALA 211 3090   2611   2350   484   178  741
ATOM   1474 O   ALA 211 20.936 10.381  62.399 1.000 23.91
ANISOU 1474 O   ALA 211 3771   2659   2653   -30   -66  930
ATOM   1475 N   PHE 212 19.889  9.629  64.204 1.000 19.88
ANISOU 1475 N   PHE 212 2603   2577   2375   398   -128 374
ATOM   1476 CA  PHE 212 18.814 10.613  64.130 1.000 19.13
ANISOU 1476 CA  PHE 212 2581   2257   2432   284   -565 317
ATOM   1477 C   PHE 212 19.320 12.006  64.489 1.000 20.00
ANISOU 1477 C   PHE 212 3004   2480   2115   133   -640 68
ATOM   1478 O   PHE 212 19.893 12.230  65.569 1.000 21.10
ANISOU 1478 O   PHE 212 2497   3558   1964   -391  -406 222
ATOM   1479 CB  PHE 212 17.688 10.290  65.096 1.000 21.37
ANISOU 1479 CB  PHE 212 2553   2616   2952   293   -197 -184
ATOM   1480 CG  PHE 212 17.010  8.950  64.912 1.000 23.45
ANISOU 1480 CG  PHE 212 2161   3496   3253   -376  -282 -558
ATOM   1481 CD1 PHE 212 16.369  8.377  65.990 1.000 23.33
ANISOU 1481 CD1 PHE 212 2545   3115   3206   -382  -350 -508
ATOM   1482 CD2 PHE 212 17.029  8.302  63.687 1.000 25.83
ANISOU 1482 CD2 PHE 212 2554   3962   3299   -622  -217 -787
ATOM   1483 CE1 PHE 212 15.730  7.149  65.872 1.000 28.13
ANISOU 1483 CE1 PHE 212 3784   3544   3362   -1119 96   -973
ATOM   1484 CE2 PHE 212 16.419  7.072  63.569 1.000 23.04
ANISOU 1484 CE2 PHE 212 2504   2960   3289   382   -232 -558
ATOM   1485 CZ  PHE 212 15.781  6.486  64.651 1.000 27.88
ANISOU 1485 CZ  PHE 212 3658   3977   2957   -1072 -501 -760
ATOM   1486 N   THR 213 19.076 12.936  63.578 1.000 18.30
ANISOU 1486 N   THR 213 2690   2083   2181   149   -583 -93
ATOM   1487 CA  THR 213 19.566 14.310  63.681 1.000 17.99
ANISOU 1487 CA  THR 213 1976   2139   2721   230   -686 -287
ATOM   1488 CB  THR 213 20.515 14.586  62.498 1.000 20.43
ANISOU 1488 CB  THR 213 1798   2280   3683   140   -119 -423
ATOM   1489 OG1 THR 213 21.638 13.695  62.629 1.000 25.33
ANISOU 1489 OG1 THR 213 2571   3378   3676   925   71   528
ATOM   1490 CG2 THR 213 21.087 15.985  62.485 1.000 21.11
ANISOU 1490 CG2 THR 213 1935   2667   3420   -310  -289 -747
ATOM   1491 C   THR 213 18.391 15.277  63.641 1.000 15.53
ANISOU 1491 C   THR 213 1732   2135   2032   111   -557 -167
ATOM   1492 O   THR 213 17.533 15.195  62.761 1.000 16.11
ANISOU 1492 O   THR 213 1742   2197   2180   -327  -669 56
ATOM   1493 N   ASP 214 18.362 16.199  64.590 1.000 15.60
ANISOU 1493 N   ASP 214 2025   2046   1857   64    -405 2
ATOM   1494 CA  ASP 214 17.380 17.256  64.672 1.000 15.59
ANISOU 1494 CA  ASP 214 2130   1722   2072   2     -1010 -242
ATOM   1495 CB  ASP 214 17.744 18.200  65.822 1.000 17.13
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ANISOU 1495 CB   ASP  214 2528     1893     2086    -226  -1022 -247
ATOM   1496 CG   ASP  214 17.612   17.672   67.219  1.000 20.21
ANISOU 1496 CG   ASP  214 3138     2495     2045    -451  -1276 -148
ATOM   1497 OD1  ASP  214 17.079   16.571   67.460  1.000 20.87
ANISOU 1497 OD1  ASP  214 2778     2632     2518    -247  -505 151
ATOM   1498 OD2  ASP  214 18.076   18.401   68.127  1.000 28.05
ANISOU 1498 OD2  ASP  214 5110     3118     2429    -257  -1997 -619
ATOM   1499 C    ASP  214 17.314   18.146   63.441  1.000 15.14
ANISOU 1499 C    ASP  214 2029     1822     1901    182   -574 -319
ATOM   1500 O    ASP  214 18.349   18.552   62.897  1.000 17.63
ANISOU 1500 O    ASP  214 1956     2032     2710    -214  -810 -15
ATOM   1501 N    LEU  215 16.105   18.493   63.027  1.000 14.69
ANISOU 1501 N    LEU  215 1936     1758     1887    38 -334  242
ATOM   1502 CA   LEU  215 15.915   19.504   61.979  1.000 13.35
ANISOU 1502 CA   LEU  215 1820     1753     1498    89 -22  5 9
ATOM   1503 CB   LEU  215 15.352   18.819   60.734  1.000 14.24
ANISOU 1503 CB   LEU  215 1735     2167     1506    -98   75  - 3
ATOM   1504 CG   LEU  215 16.291   17.813   60.056  1.000 16.39
ANISOU 1504 CG   LEU  215 2031     2285     1911    -340  320  - 424
ATOM   1505 CD1  LEU  215 15.517   16.999   59.031  1.000 22.61
ANISOU 1505 CD1  LEU  215 3139     2024     3427    -10   -801 -877
ATOM   1506 CD2  LEU  215 17.482   18.543   59.434  1.000 26.93
ANISOU 1506 CD2  LEU  215 1998     5409     2827    -1083 909  - 542
ATOM   1507 C    LEU  215 15.002   20.622   62.500  1.000 14.65
ANISOU 1507 C    LEU  215 1770     1607     2190    86 -165  - 95
ATOM   1508 O    LEU  215 13.822   20.662   62.151  1.000 19.45
ANISOU 1508 O    LEU  215 1748     2165     3476    116   -303 -203
ATOM   1509 N    PRO  216 15.552   21.523   63.314  1.000 15.99
ANISOU 1509 N    PRO  216 2390     1970     1715    -164  21 -175
ATOM   1510 CD   PRO  216 16.955   21.601   63.757  1.000 19.37
ANISOU 1510 CD   PRO  216 2900     2306     2155    -83   -790 -548
ATOM   1511 CA   PRO  216 14.760   22.620   63.846  1.000 18.68
ANISOU 1511 CA   PRO  216 3104     2017     1976    12 -74  - 420
ATOM   1512 CB   PRO  216 15.649   23.227   64.949  1.000 18.63
ANISOU 1512 CB   PRO  216 3592     1517     1971    -120  -421 9
ATOM   1513 CG   PRO  216 17.030   22.847   64.581  1.000 22.35
ANISOU 1513 CG   PRO  216 3401     2426     2666    -419  -427 -783
ATOM   1514 C    PRO  216 14.461   23.700   62.819  1.000 18.50
ANISOU 1514 C    PRO  216 2921     2083     2026    58 -465  - 473
ATOM   1515 O    PRO  216 15.024   23.854   61.731  1.000 19.82
ANISOU 1515 O    PRO  216 2752     2453     2325    -32   -375 1 9
ATOM   1516 N    TYR  217 13.487   24.536   63.194  1.000 20.05
ANISOU 1516 N    TYR  217 3213     1981     2422    90 -482  - 718
ATOM   1517 CA   TYR  217 13.178   25.662   62.308  1.000 22.97
ANISOU 1517 CA   TYR  217 2849     2652     3227    211   -1467 -313
ATOM   1518 C    TYR  217 14.347   26.647   62.283  1.000 23.92
ANISOU 1518 C    TYR  217 4139     2131     2819    -337  -1776 -165
ATOM   1519 O    TYR  217 15.149   26.726   63.213  1.000 30.46
ANISOU 1519 O    TYR  217 4321     3440     3812    -1118 -2477 728
ATOM   1520 CB   TYR  217 11.891   26.314   62.768  1.000 32.68
ANISOU 1520 CB   TYR  217 3958     3294     5164    1148  -874 -783
ATOM   1521 CG   TYR  217 12.064   27.462   63.718  1.000 44.77
ANISOU 1521 CG   TYR  217 6829     4326     5854    895   38 -1870
ATOM   1522 CD1  TYR  217 11.853   28.763   63.285  1.000 54.26
ANISOU 1522 CD1  TYR  217 10311    3688     6615    -323  132  - 1945
ATOM   1523 CD2  TYR  217 12.428   27.243   65.043  1.000 57.77
ANISOU 1523 CD2  TYR  217 10635    5155     6158    -1027 -1446 -1931
ATOM   1524 CE1  TYR  217 12.011   29.816   64.174  1.000 60.33
ANISOU 1524 CE1  TYR  217 11807    4345     6772    -1101 -132 -2259
ATOM   1525 CE2  TYR  217 12.585   28.296   65.926  1.000 64.51
ANISOU 1525 CE2  TYR  217 12481    5199     6832    -1936 -1520 -2074
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- 140 -

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ATOM     1526 CZ   TYR  217 12.378  29.586  65.481  1.000 64.11
ANISOU   1526 CZ   TYR  217 12047    5183    7129   -1460 -817 -2160
ATOM     1527 OH   TYR  217 12.536  30.639  66.358  1.000 63.69
ANISOU   1527 OH   TYR  217 11840    5206    7153   -1832 -1191 -2064
ATOM     1528 N    ARG  218 14.418  27.374  61.188  1.000 24.08
ANISOU   1528 N    ARG  218 4482    1611    3055    507  -1471 -145
ATOM     1529 CA   ARG  218 15.335  28.465  60.948  1.000 30.71
ANISOU   1529 CA   ARG  218 5932    2490    3245   -504  -1565 382
ATOM     1530 CB   ARG  218 16.326  28.135  59.840  1.000 35.08
ANISOU   1530 CB   ARG  218 5969    2797    4562   -1397 -779 -348
ATOM     1531 CG   ARG  218 17.401  27.114  60.073  1.000 35.77
ANISOU   1531 CG   ARG  218 6009    3087    4497   -1107 -733 -773
ATOM     1532 CD   ARG  218 18.658  27.775  60.626  1.000 34.46
ANISOU   1532 CD   ARG  218 5680    3264    4152   -1242 -244 -619
ATOM     1533 NE   ARG  218 19.223  28.746  59.709  1.000 29.51
ANISOU   1533 NE   ARG  218 4707    2579    3926    78  81  -629
ATOM     1534 CZ   ARG  218 20.218  28.620  58.830  1.000 33.18
ANISOU   1534 CZ   ARG  218 5269    3166    4170    60  452  -1075
ATOM     1535 NH1  ARG  218 20.839  27.452  58.709  1.000 27.44
ANISOU   1535 NH1  ARG  218 4202    2881    3341   -503  -373 -1585
ATOM     1536 NH2  ARG  218 20.583  29.675  58.077  1.000 22.96
ANISOU   1536 NH2  ARG  218 2327    3579    2817    233  -1117 -872
ATOM     1537 C    ARG  218 14.513  29.655  60.464  1.000 31.05
ANISOU   1537 C    ARG  218 7353    1949    2496   -448  -1823 197
ATOM     1538 O    ARG  218 14.114  29.533  59.295  1.000 40.40
ANISOU   1538 O    ARG  218 9873    2241    3235    531  -3168 -627
ATOM     1539 N    PRO  219 14.246  30.747  61.157  1.000 30.01
ANISOU   1539 N    PRO  219 6290    2559    2555   -499  -1839 -284
ATOM     1540 CD   PRO  219 14.597  31.043  62.543  1.000 36.79
ANISOU   1540 CD   PRO  219 8147    2878    2954   -1848 -2548 -374
ATOM     1541 CA   PRO  219 13.464  31.841  60.549  1.000 26.34
ANISOU   1541 CA   PRO  219 4421    2564    3025   -573  -988 -340
ATOM     1542 CB   PRO  219 13.523  32.993  61.563  1.000 32.44
ANISOU   1542 CB   PRO  219 5361    2891    4073   -691  -417 -989
ATOM     1543 CG   PRO  219 13.947  32.372  62.825  1.000 38.75
ANISOU   1543 CG   PRO  219 7916    3462    3344   -1981 -958 -1235
ATOM     1544 C    PRO  219 14.005  32.329  59.220  1.000 23.64
ANISOU   1544 C    PRO  219 3472    2066    3443   -161  -1028 109
ATOM     1545 O    PRO  219 13.300  32.950  58.412  1.000 30.61
ANISOU   1545 O    PRO  219 4358    2934    4339   -347  -1712 876
ATOM     1546 N    ASP  220 15.269  32.087  58.906  1.000 25.98
ANISOU   1546 N    ASP  220 3611    1756    4506   -389  -644 -815
ATOM     1547 CA   ASP  220 15.847  32.660  57.705  1.000 27.96
ANISOU   1547 CA   ASP  220 3951    1603    5071   -364   30  -824
ATOM     1548 CB   ASP  220 17.212  33.238  58.155  1.000 29.61
ANISOU   1548 CB   ASP  220 3549    3142    4558   -176  -326 176
ATOM     1549 CG   ASP  220 18.091  32.158  58.780  1.000 32.09
ANISOU   1549 CG   ASP  220 3706    3527    4961    625  978  615
ATOM     1550 OD1  ASP  220 17.697  31.434  59.719  1.000 26.12
ANISOU   1550 OD1  ASP  220 3013    3522    3390   -158  -289 -97
ATOM     1551 OD2  ASP  220 19.241  32.088  58.281  1.000 29.09
ANISOU   1551 OD2  ASP  220 3714    3756    3581    304  677  -712
ATOM     1552 C    ASP  220 16.037  31.726  56.525  1.000 25.26
ANISOU   1552 C    ASP  220 2508    1291    5800    354  1110 -822
ATOM     1553 O    ASP  220 16.641  32.095  55.515  1.000 28.28
ANISOU   1553 O    ASP  220 4088    1665    4994   -855  298  -434
ATOM     1554 N    ALA  221 15.500  30.510  56.631  1.000 21.58
ANISOU   1554 N    ALA  221 2748    1770    3681   -288  178  -651
ATOM     1555 CA   ALA  221 15.840  29.484  55.658  1.000 19.81
ANISOU   1555 CA   ALA  221 2986    1452    3090   -342  -224 -315
ATOM     1556 CB   ALA  221 17.130  28.800  56.109  1.000 19.51
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ANISOU 1556 CB   ALA  221 2267      1497      3647     -648   45 -746
ATOM   1557 C    ALA  221 14.718  28.469  55.489  1.000 17.71
ANISOU 1557 C    ALA  221 2304      1912      2512     -251   -75  -309
ATOM   1558 O    ALA  221 13.866  28.356  56.380  1.000 20.97
ANISOU 1558 O    ALA  221 3596      2029      2344     -503  406  -284
ATOM   1559 N    VAL  222 14.728  27.756  54.378  1.000 14.22
ANISOU 1559 N    VAL  222 1560      1582      2262      -76   -92   -11
ATOM   1560 CA   VAL  222 13.823  26.617  54.160  1.000 14.89
ANISOU 1560 CA   VAL  222 1326      1608      2723       98 -216  -205
ATOM   1561 CB   VAL  222 13.079  26.779  52.830  1.000 17.28
ANISOU 1561 CB   VAL  222 1680      1754      3133       90 -657  -144
ATOM   1562 CG1  VAL  222 13.995  26.685  51.620  1.000 19.17
ANISOU 1562 CG1  VAL  222 1974      2625      2686     -446  -775 150
ATOM   1563 CG2  VAL  222 11.996  25.747  52.641  1.000 17.36
ANISOU 1563 CG2  VAL  222 2185      1879      2533     -254  -362 -385
ATOM   1564 C    VAL  222 14.653  25.339  54.263  1.000 12.66
ANISOU 1564 C    VAL  222 1136      1564      2112      -50  -225 -378
ATOM   1565 O    VAL  222 15.828  25.320  53.893  1.000 13.12
ANISOU 1565 O    VAL  222 1280      1825      1881      104   -13  -199
ATOM   1566 N    LEU  223 14.049  24.267  54.775  1.000 12.98
ANISOU 1566 N    LEU  223 1123      1538      2270     -163  -370 -417
ATOM   1567 CA   LEU  223 14.681  22.952  54.749  1.000 10.70
ANISOU 1567 CA   LEU  223 891 1704      1472      -26   -98   -7
ATOM   1568 CB   LEU  223 14.276  22.130  55.961  1.000 13.02
ANISOU 1568 CB   LEU  223 1387      1968      1593     -419  289   -108
ATOM   1569 CG   LEU  223 14.739  20.683  56.106  1.000 17.41
ANISOU 1569 CG   LEU  223 2434      2132      2050     -290  -476 566
ATOM   1570 CD1  LEU  223 16.247  20.614  56.204  1.000 17.20
ANISOU 1570 CD1  LEU  223 2576      1518      2441       26 -989  -249
ATOM   1571 CD2  LEU  223 13.983  20.076  57.282  1.000 33.63
ANISOU 1571 CD2  LEU  223 3981      4721      4077     -341  134  2949
ATOM   1572 C    LEU  223 14.362  22.211  53.456  1.000 10.02
ANISOU 1572 C    LEU  223 1000      1265      1543       58 -319    88
ATOM   1573 O    LEU  223 13.206  22.160  53.088  1.000 12.86
ANISOU 1573 O    LEU  223 949 1945      1992      -97  -174  -372
ATOM   1574 N    VAL  224 15.406  21.675  52.798  1.000 10.55
ANISOU 1574 N    VAL  224 978 1070      1962      -76  -418  -382
ATOM   1575 CA   VAL  224 15.227  20.932  51.553  1.000 11.98
ANISOU 1575 CA   VAL  224 1376      1288      1887     -249  -278 -372
ATOM   1576 CB   VAL  224 16.095  21.461  50.391  1.000 11.23
ANISOU 1576 CB   VAL  224 901 1541      1824      -279  -622   -99
ATOM   1577 CG1  VAL  224 15.833  20.690  49.102  1.000 13.16
ANISOU 1577 CG1  VAL  224 1899      1485      1615     -462  -516 8 4
ATOM   1578 CG2  VAL  224 15.837  22.941  50.156  1.000 13.86
ANISOU 1578 CG2  VAL  224 1480      1520      2266     -135  -354 -64
ATOM   1579 C    VAL  224 15.539  19.450  51.786  1.000 10.87
ANISOU 1579 C    VAL  224 953 1275      1901      -13  342 -484
ATOM   1580 O    VAL  224 16.646  19.148  52.201  1.000 12.57
ANISOU 1580 O    VAL  224 1283      1363      2132     -175  -154 -274
ATOM   1581 N    PHE  225 14.585  18.553  51.533  1.000 11.86
ANISOU 1581 N    PHE  225 1241      1128      2137      -15  -303  -61
ATOM   1582 CA   PHE  225 14.811  17.130  51.412  1.000 11.38
ANISOU 1582 CA   PHE  225 1260      1157      1909      -22   -67   -56
ATOM   1583 CB   PHE  225 13.707  16.280  52.044  1.000 11.34
ANISOU 1583 CB   PHE  225 1117      1176      2015      205  -213 335
ATOM   1584 CG   PHE  225 13.654  16.172  53.544  1.000 11.38
ANISOU 1584 CG   PHE  225 964 1369      1991     -251  -333  181
ATOM   1585 CD1  PHE  225 14.685  15.653  54.291  1.000 15.28
ANISOU 1585 CD1  PHE  225 1771      1777      2256      -98  -853 298
ATOM   1586 CD2  PHE  225 12.532  16.576  54.254  1.000 17.91
ANISOU 1586 CD2  PHE  225 1904      2748      2153      341  106    0
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- 142 -

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ATOM    1587 CE1 PHE   225 14.619   15.535   55.661  1.000 17.46
ANISOU  1587 CE1 PHE   225 2449     1862     2321    -249  -795 6 6
ATOM    1588 CE2 PHE   225 12.447   16.474   55.612  1.000 19.35
ANISOU  1588 CE2 PHE   225 2563     2678     2111    121   129  - 1 1
ATOM    1589 CZ  PHE   225 13.499   15.945   56.341  1.000 18.20
ANISOU  1589 CZ  PHE   225 2952     1641     2324    -501  -470 3 6
ATOM    1590 C   PHE   225 14.907   16.774   49.927  1.000 12.03
ANISOU  1590 C   PHE   225 1480     1285     1804    130   -201 4 2
ATOM    1591 O   PHE   225 14.019   17.160   49.163  1.000 12.77
ANISOU  1591 O   PHE   225 1473     1466     1912    341   -118 3 8
ATOM    1592 N   CYS   226 15.940   16.032   49.521  1.000 9.62
ANISOU  1592 N   CYS   226 954 1403          1296    -204  -407 2 9
ATOM    1593 CA  CYS   226 15.917   15.400   48.197  1.000 10.80
ANISOU  1593 CA  CYS   226 1432     1204     1468    -258  -310 - 5 9
ATOM    1594 CB  CYS   226 17.337   15.029   47.744  1.000 12.02
ANISOU  1594 CB  CYS   226 1539     1362     1666    -357  16  -125
ATOM    1595 SG  CYS   226 18.426   16.490   47.554  1.000 13.74
ANISOU  1595 SG  CYS   226 1627     1400     2192    -341  18  139
ATOM    1596 C   CYS   226 14.998   14.178   48.256  1.000 9.86
ANISOU  1596 C   CYS   226 1190     1061     1495    -20   -293 - 1 6
ATOM    1597 O   CYS   226 15.015   13.431   49.252  1.000 11.17
ANISOU  1597 O   CYS   226 1181     1280     1781    -129  -435 2 7 2
ATOM    1598 N   GLY   227 14.217   13.963   47.205  1.000 10.17
ANISOU  1598 N   GLY   227 1428     1010     1427    -258  -271 - 3 5
ATOM    1599 CA  GLY   227 13.370   12.806   47.053  1.000 9.73
ANISOU  1599 CA  GLY   227 1231     860 1604         -178  -74  - 3 7
ATOM    1600 C   GLY   227 13.908   11.769   46.074  1.000 9.48
ANISOU  1600 C   GLY   227 1438     717 1445         16 -35    1 6 9
ATOM    1601 O   GLY   227 14.935   11.961   45.402  1.000 9.86
ANISOU  1601 O   GLY   227 1321     1137     1290    -104  -179 7 8
ATOM    1602 N   ALA   228 13.217   10.631   45.971  1.000 9.17
ANISOU  1602 N   ALA   228 1279     729 1477         109   -135 5 8
ATOM    1603 CA  ALA   228 13.650   9.529    45.108  1.000 9.41
ANISOU  1603 CA  ALA   228 1315     887 1371         9     -74  - 5 2
ATOM    1604 CB  ALA   228 12.727   8.296    45.256  1.000 10.50
ANISOU  1604 CB  ALA   228 2011     824 1155         -143  124 101
ATOM    1605 C   ALA   228 13.712   9.918    43.637  1.000 9.25
ANISOU  1605 C   ALA   228 1343     666 1507         -108  90 139
ATOM    1606 O   ALA   228 14.493   9.305    42.895  1.000 9.48
ANISOU  1606 O   ALA   228 1171     1026     1405    -88   -50 9 0
ATOM    1607 N   ILE   229 12.970   10.907   43.143  1.000 10.30
ANISOU  1607 N   ILE   229 1402     1004     1509    18 25 177
ATOM    1608 CA  ILE   229 13.074   11.311   41.727  1.000 10.87
ANISOU  1608 CA  ILE   229 1197     1446     1487    -2 -159  2 5 1
ATOM    1609 CB  ILE   229 11.802   12.078   41.295  1.000 11.52
ANISOU  1609 CB  ILE   229 1257     1473     1647    34 -57 3 6 2
ATOM    1610 CG2 ILE   229 11.997   12.852   39.999  1.000 11.30
ANISOU  1610 CG2 ILE   229 1655     1211     1426    83 -189  1 5 6
ATOM    1611 CG1 ILE   229 10.575   11.131   41.237  1.000 14.39
ANISOU  1611 CG1 ILE   229 1031     2034     2402    -40   210  3 1 1
ATOM    1612 CD1 ILE   229 10.676   10.093   40.138  1.000 19.20
ANISOU  1612 CD1 ILE   229 2085     1723     3489    -610  93 - 1 3 8
ATOM    1613 C   ILE   229 14.389   12.034   41.477  1.000 10.38
ANISOU  1613 C   ILE   229 1293     1405     1247    -62   -169 3 2 2
ATOM    1614 O   ILE   229 14.952   11.947   40.369  1.000 11.66
ANISOU  1614 O   ILE   229 1805     1257     1368    -13   145  3 2 8
ATOM    1615 N   ALA   230 14.965   12.692   42.490  1.000 10.66
ANISOU  1615 N   ALA   230 1476     1274     1300    -104  -151 3 5 6
ATOM    1616 CA  ALA   230 16.312   13.259   42.338  1.000 11.21
ANISOU  1616 CA  ALA   230 1473     975 1813         -57   -308 9 0
ATOM    1617 CB  ALA   230 16.681   14.148   43.509  1.000 10.58
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ANISOU 1617  CB   ALA  230 1350     1295     1375     62 -106  126
ATOM   1618  C    ALA  230 17.336  12.136  42.132  1.000 11.28
ANISOU 1618  C    ALA  230 1640     1037     1610      1  55  242
ATOM   1619  O    ALA  230 18.220  12.185  41.273  1.000 11.29
ANISOU 1619  O    ALA  230 1510     1240     1539   -189  -40  288
ATOM   1620  N    THR  231 17.173  11.097  42.946  1.000 10.55
ANISOU 1620  N    THR  231 1328      894  1787    -262  -70 214
ATOM   1621  CA   THR  231 18.064   9.939  42.819  1.000 11.98
ANISOU 1621  CA   THR  231 1929     1018     1605      0 -164  159
ATOM   1622  CB   THR  231 17.717   8.865  43.878  1.000 10.76
ANISOU 1622  CB   THR  231 1381     1070     1636    -86  -453 246
ATOM   1623  OG1  THR  231 17.658   9.437  45.198  1.000 11.82
ANISOU 1623  OG1  THR  231 1615     1236     1641     35 -115  277
ATOM   1624  CG2  THR  231 18.765   7.752  43.880  1.000 12.57
ANISOU 1624  CG2  THR  231 1621     1314     1840    160  -89  351
ATOM   1625  C    THR  231 17.958   9.352  41.415  1.000 12.52
ANISOU 1625  C    THR  231 1632     1500     1624   -145   42  1 1
ATOM   1626  O    THR  231 18.939   9.050  40.732  1.000 12.15
ANISOU 1626  O    THR  231 1636     1233     1747    -17   86 224
ATOM   1627  N    LEU  232 16.717   9.154  40.959  1.000 11.14
ANISOU 1627  N    LEU  232 1608     1005     1620     90 -68  141
ATOM   1628  CA   LEU  232 16.446   8.522  39.675  1.000 12.47
ANISOU 1628  CA   LEU  232 1880     1203     1657    109  -169  4 5
ATOM   1629  CB   LEU  232 14.950   8.214  39.552  1.000 12.81
ANISOU 1629  CB   LEU  232 1989     1225     1654    -78  -209  1 9
ATOM   1630  CG   LEU  232 14.452   7.464  38.314  1.000 14.85
ANISOU 1630  CG   LEU  232 2171     1753     1719     -5  -410  - 96
ATOM   1631  CD1  LEU  232 15.020   6.055  38.240  1.000 16.78
ANISOU 1631  CD1  LEU  232 2693     1749     1932     72 -431   - 487
ATOM   1632  CD2  LEU  232 12.914   7.411  38.291  1.000 15.70
ANISOU 1632  CD2  LEU  232 2180     1866     1920   -278  -589 494
ATOM   1633  C    LEU  232 16.964   9.354  38.511  1.000 11.58
ANISOU 1633  C    LEU  232 1452     1390     1559    309  -301 136
ATOM   1634  O    LEU  232 17.752   8.837  37.686  1.000 13.45
ANISOU 1634  O    LEU  232 1808     1436     1867    320  -17  3 0
ATOM   1635  N    VAL  233 16.565  10.617  38.414  1.000 10.95
ANISOU 1635  N    VAL  233 1428     1210     1522    -14  -210  0
ATOM   1636  CA   VAL  233 16.948  11.421  37.242  1.000 11.70
ANISOU 1636  CA   VAL  233 1703     1345     1397     97  5   1 3
ATOM   1637  CB   VAL  233 16.156  12.743  37.215  1.000 11.14
ANISOU 1637  CB   VAL  233 1672     1272     1287    -26   276  7 3
ATOM   1638  CG1  VAL  233 16.661  13.774  38.249  1.000 13.34
ANISOU 1638  CG1  VAL  233 1834     1562     1673   -205   653  - 368
ATOM   1639  CG2  VAL  233 16.106  13.412  35.827  1.000 14.66
ANISOU 1639  CG2  VAL  233 1992     1873     1704     -4  -45 586
ATOM   1640  C    VAL  233 18.459  11.586  37.132  1.000 13.41
ANISOU 1640  C    VAL  233 1712     1573     1811     91 151 125
ATOM   1641  O    VAL  233 19.012  11.627  36.021  1.000 13.45
ANISOU 1641  O    VAL  233 1844     1402     1866     46 192  438
ATOM   1642  N    THR  234 19.188  11.665  38.250  1.000 13.13
ANISOU 1642  N    THR  234 1457     1639     1893   -139  223  126
ATOM   1643  CA   THR  234 20.613  11.930  38.244  1.000 13.00
ANISOU 1643  CA   THR  234 1483     1600     1855   -188  428  143
ATOM   1644  CB   THR  234 21.069  12.726  39.465  1.000 12.46
ANISOU 1644  CB   THR  234 1300     1632     1803    -32   200  251
ATOM   1645  OG1  THR  234 20.825  11.941  40.639  1.000 13.71
ANISOU 1645  OG1  THR  234 1660     1662     1888    192   202  291
ATOM   1646  CG2  THR  234 20.301  14.027  39.643  1.000 11.37
ANISOU 1646  CG2  THR  234 1097     1565     1657   -153  -87  169
ATOM   1647  C    THR  234 21.424  10.643  38.178  1.000 14.44
ANISOU 1647  C    THR  234 1550     1823     2114      6  -73 - 53
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- 144 -

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ATOM    1648 O   THR 234 22.659 10.710 38.233 1.000 15.81
ANISOU  1648 O   THR 234 1546   2169   2293    61 27 217
ATOM    1649 N   GLY 235 20.767 9.477  38.070 1.000 14.76
ANISOU  1649 N   GLY 235 1776   1576   2254    77 81 4 10
ATOM    1650 CA  GLY 235 21.530 8.249  37.994 1.000 16.69
ANISOU  1650 CA  GLY 235 2053   1803   2486    304   35 189
ATOM    1651 C   GLY 235 22.243 7.862  39.275 1.000 16.83
ANISOU  1651 C   GLY 235 1854   2031   2512    765   244 193
ATOM    1652 O   GLY 235 23.305 7.237  39.194 1.000 19.67
ANISOU  1652 O   GLY 235 2074   2172   3225    1035  383 372
ATOM    1653 N   GLY 236 21.665 8.227  40.425 1.000 14.46
ANISOU  1653 N   GLY 236 1732   1327   2433    154   198 7 5
ATOM    1654 CA  GLY 236 22.187 7.768  41.692 1.000 15.73
ANISOU  1654 CA  GLY 236 2060   1381   2536    41 186 312
ATOM    1655 C   GLY 236 23.166 8.691  42.388 1.000 14.76
ANISOU  1655 C   GLY 236 1931   1332   2346    252   73 288
ATOM    1656 O   GLY 236 23.778 8.244  43.373 1.000 18.32
ANISOU  1656 O   GLY 236 1983   2197   2782    106  -105 8 44
ATOM    1657 N   GLN 237 23.318 9.938  41.953 1.000 13.99
ANISOU  1657 N   GLN 237 1831   1349   2137    158   165 17 0
ATOM    1658 CA  GLN 237 24.209 10.956 42.485 1.000 13.13
ANISOU  1658 CA  GLN 237 1474   1304   2210    367  -31 2 76
ATOM    1659 CB  GLN 237 24.629 11.948 41.383 1.000 13.38
ANISOU  1659 CB  GLN 237 1367   1566   2151    99 72 159
ATOM    1660 CG  GLN 237 25.390 11.335 40.219 1.000 14.74
ANISOU  1660 CG  GLN 237 1404   1529   2666    518   410 3 33
ATOM    1661 CD  GLN 237 25.816 12.428 39.257 1.000 17.22
ANISOU  1661 CD  GLN 237 2039   2018   2486   -64    426 3 60
ATOM    1662 OE1 GLN 237 26.754 13.208 39.522 1.000 20.60
ANISOU  1662 OE1 GLN 237 1566   2334   3928   -10   -29 9 65
ATOM    1663 NE2 GLN 237 25.116 12.470 38.127 1.000 17.47
ANISOU  1663 NE2 GLN 237 2014   2093   2533    208   438 4 08
ATOM    1664 C   GLN 237 23.627 11.739 43.663 1.000 12.90
ANISOU  1664 C   GLN 237 1474   1324   2104    72 -10 2 55
ATOM    1665 O   GLN 237 24.332 12.549 44.282 1.000 15.90
ANISOU  1665 O   GLN 237 1739   1888   2413   -291   74 - 84
ATOM    1666 N   VAL 238 22.365 11.481 44.013 1.000 12.13
ANISOU  1666 N   VAL 238 1372   962 2276    212   -33 2 00
ATOM    1667 CA  VAL 238 21.664 12.182 45.082 1.000 11.91
ANISOU  1667 CA  VAL 238 1169   1436   1920   -121  -276 - 19
ATOM    1668 CB  VAL 238 20.622 13.158 44.510 1.000 12.00
ANISOU  1668 CB  VAL 238 1024   1179   2357   -6 199 - 31
ATOM    1669 CG1 VAL 238 19.978 13.999 45.601 1.000 13.07
ANISOU  1669 CG1 VAL 238 1530   1668   1767    63 -232  - 222
ATOM    1670 CG2 VAL 238 21.207 14.088 43.463 1.000 14.00
ANISOU  1670 CG2 VAL 238 1795   1470   2053   -40   -2 1 81
ATOM    1671 C   VAL 238 20.990 11.156 46.000 1.000 13.62
ANISOU  1671 C   VAL 238 1707   1415   2054   -103  -40  - 22
ATOM    1672 O   VAL 238 20.252 10.288 45.492 1.000 12.64
ANISOU  1672 O   VAL 238 1702   977 2123     60  -318 2 57
ATOM    1673 N   LYS 239 21.247 11.246 47.300 1.000 11.99
ANISOU  1673 N   LYS 239 1075   1404   2076    127  -101 7 4
ATOM    1674 CA  LYS 239 20.568 10.444 48.322 1.000 12.77
ANISOU  1674 CA  LYS 239 1224   1541   2088   -12   -124 8 6
ATOM    1675 CB  LYS 239 21.382 10.463 49.622 1.000 12.23
ANISOU  1675 CB  LYS 239 1333   1155   2158    183  -234 - 2 8
ATOM    1676 CG  LYS 239 20.953 9.626  50.793 1.000 13.85
ANISOU  1676 CG  LYS 239 1643   1689   1931    187  -52  - 89
ATOM    1677 CD  LYS 239 21.927 9.579  51.957 1.000 20.13
ANISOU  1677 CD  LYS 239 2893   1795   2961    10 -1185 5 88
ATOM    1678 CE  LYS 239 21.364 8.745  53.098 1.000 24.73
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ANISOU 1678  CE  LYS  239 4065    2250    3080    -348  -1466 1064
ATOM   1679  NZ  LYS  239 22.019  8.841   54.420  1.000 32.28
ANISOU 1679  NZ  LYS  239 5658    4315    2293    1610  -930 -304
ATOM   1680  C   LYS  239 19.169  10.949  48.661  1.000 11.59
ANISOU 1680  C   LYS  239 1207    1332    1866    -35   -82   6 4
ATOM   1681  O   LYS  239 18.976  12.191  48.708  1.000 12.32
ANISOU 1681  O   LYS  239 1638    1294    1749    -2    -25 236
ATOM   1682  N   ALA  240 18.222  10.047  48.863  1.000 10.65
ANISOU 1682  N   ALA  240 1248    1266    1534    -52   -185 -8 8
ATOM   1683  CA  ALA  240 16.884  10.368  49.354  1.000 10.21
ANISOU 1683  CA  ALA  240 1292    1057    1531    -195  -37  -1 0 9
ATOM   1684  CB  ALA  240 15.784  9.782   48.466  1.000 13.46
ANISOU 1684  CB  ALA  240 1195    2378    1543    -232  20 -4 0 3
ATOM   1685  C   ALA  240 16.784  9.881   50.807  1.000 10.97
ANISOU 1685  C   ALA  240 1308    1249    1611    -127  -142 4 9
ATOM   1686  O   ALA  240 16.595  8.664   51.059  1.000 13.02
ANISOU 1686  O   ALA  240 2136    1242    1568    -243  28 - 7
ATOM   1687  N   PRO  241 16.967  10.783  51.782  1.000 11.13
ANISOU 1687  N   PRO  241 1723    1041    1466    160   -49  1 3 8
ATOM   1688  CD  PRO  241 17.172  12.237  51.654  1.000 11.17
ANISOU 1688  CD  PRO  241 1419    1204    1618    -180  -128 7 6
ATOM   1689  CA  PRO  241 17.043  10.340  53.166  1.000 11.96
ANISOU 1689  CA  PRO  241 1597    1447    1499    -172  -32  19 3
ATOM   1690  CB  PRO  241 17.712  11.545  53.891  1.000 14.25
ANISOU 1690  CB  PRO  241 1875    1837    1701    -531  -383 24 2
ATOM   1691  CG  PRO  241 17.286  12.724  53.069  1.000 13.61
ANISOU 1691  CG  PRO  241 2015    1446    1709    -596  -465 - 2 2
ATOM   1692  C   PRO  241 15.708  10.072  53.861  1.000 12.35
ANISOU 1692  C   PRO  241 1417    1610    1665    -175  -187 4 1 8
ATOM   1693  O   PRO  241 14.759  10.829  53.655  1.000 12.28
ANISOU 1693  O   PRO  241 1359    1582    1723    -232  -468 8 1
ATOM   1694  N   ARG  242 15.700  9.033   54.711  1.000 12.75
ANISOU 1694  N   ARG  242 1775    1407    1664    -170  76 25 0
ATOM   1695  CA  ARG  242 14.563  8.804   55.576  1.000 10.76
ANISOU 1695  CA  ARG  242 1292    1417    1380    -207  -281 21 1
ATOM   1696  CB  ARG  242 14.614  7.405   56.223  1.000 15.02
ANISOU 1696  CB  ARG  242 2419    1368    1918    -357  117  2 9 4
ATOM   1697  CG  ARG  242 14.115  6.342   55.230  1.000 17.85
ANISOU 1697  CG  ARG  242 3373    1274    2135    9    -560  2 5 1
ATOM   1698  CD  ARG  242 14.254  4.934   55.763  1.000 19.42
ANISOU 1698  CD  ARG  242 3148    1111    3120    506   503  1 1 6
ATOM   1699  NE  ARG  242 15.667  4.552   55.849  1.000 20.71
ANISOU 1699  NE  ARG  242 3225    2107    2538    938   638  2 1 2
ATOM   1700  CZ  ARG  242 16.107  3.444   56.416  1.000 23.22
ANISOU 1700  CZ  ARG  242 3198    2206    3417    307   -544 589
ATOM   1701  NH1 ARG  242 15.285  2.567   56.980  1.000 24.46
ANISOU 1701  NH1 ARG  242 4097    2112    3083    307   387  1 9 5
ATOM   1702  NH2 ARG  242 17.416  3.184   56.438  1.000 25.41
ANISOU 1702  NH2 ARG  242 3402    2332    3921    819   -267 4 0 3
ATOM   1703  C   ARG  242 14.477  9.834   56.704  1.000 11.95
ANISOU 1703  C   ARG  242 1571    1463    1506    -248  -214 1 0 7
ATOM   1704  O   ARG  242 15.469  10.377  57.213  1.000 13.65
ANISOU 1704  O   ARG  242 1708    1439    2040    -322  -401 -3 8
ATOM   1705  N   HIS  243 13.252  10.085  57.118  1.000 11.60
ANISOU 1705  N   HIS  243 1657    1410    1342    -311  -206 5
ATOM   1706  CA  HIS  243 12.942  11.056  58.158  1.000 11.49
ANISOU 1706  CA  HIS  243 1855    1571    938  -306  -183  1 4 0
ATOM   1707  CB  HIS  243 12.968  12.462  57.546  1.000 11.22
ANISOU 1707  CB  HIS  243 1432    1379    1453    -231  -221 3 9
ATOM   1708  CG  HIS  243 12.133  12.694  56.341  1.000 11.80
ANISOU 1708  CG  HIS  243 1937    1171    1378    -31   -268 7 9
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ATOM    1709 CD2 HIS   243 10.885   13.236  56.181  1.000 11.15
ANISOU  1709 CD2 HIS   243 1990     1106    1142     35 -344  1 4 1
ATOM    1710 ND1 HIS   243 12.538   12.345  55.086  1.000 12.29
ANISOU  1710 ND1 HIS   243 1670     1606    1395   -394  -91   8
ATOM    1711 CE1 HIS   243 11.599   12.653  54.209  1.000 12.59
ANISOU  1711 CE1 HIS   243 1686     1740    1357   -522 -202 -2 5 3
ATOM    1712 NE2 HIS   243 10.585   13.204  54.841  1.000 10.77
ANISOU  1712 NE2 HIS   243 1612     1307    1172   -616 -268 - 3 6
ATOM    1713 C   HIS   243 11.605   10.737  58.812  1.000 12.49
ANISOU  1713 C   HIS   243 1869     1570    1308   -321  -53  7 3
ATOM    1714 O   HIS   243 10.807    9.949  58.271  1.000 12.26
ANISOU  1714 O   HIS   243 1756     1404    1497   -188 -115 4 7
ATOM    1715 N   HIS   244 11.352   11.319  59.983  1.000 12.16
ANISOU  1715 N   HIS   244 1464     1715    1442   -230 -112 - 3 2
ATOM    1716 CA  HIS   244 10.138   11.043  60.758  1.000 12.02
ANISOU  1716 CA  HIS   244 1606     1809    1152   -599 -167 - 2 4
ATOM    1717 CB  HIS   244 10.255    9.778  61.615  1.000 12.51
ANISOU  1717 CB  HIS   244 1655     1763    1334    -19  101  - 4 7
ATOM    1718 CG  HIS   244 11.270    9.810  62.698  1.000 15.04
ANISOU  1718 CG  HIS   244 2025     1723    1965   -178 -433 1 5 4
ATOM    1719 CD2 HIS   244 11.276   10.380  63.923  1.000 18.19
ANISOU  1719 CD2 HIS   244 2946     2339    1627     36 -732  2 9 7
ATOM    1720 ND1 HIS   244 12.504    9.203  62.662  1.000 19.30
ANISOU  1720 ND1 HIS   244 2303     2232    2800    229  -708 2 6 6
ATOM    1721 CE1 HIS   244 13.226    9.387  63.731  1.000 22.48
ANISOU  1721 CE1 HIS   244 2649     2734    3159     11 -1206 6 5 0
ATOM    1722 NE2 HIS   244 12.476   10.120  64.531  1.000 22.33
ANISOU  1722 NE2 HIS   244 3088     2895    2500   -272 -1236 3 8 4
ATOM    1723 C   HIS   244  9.780   12.246  61.613  1.000 13.47
ANISOU  1723 C   HIS   244 1897     1673    1549   -362  254  6 7
ATOM    1724 O   HIS   244 10.603   13.165  61.798  1.000 13.48
ANISOU  1724 O   HIS   244 1800     1726    1595   -283  139  - 161
ATOM    1725 N   VAL   245  8.551   12.245  62.130  1.000 15.26
ANISOU  1725 N   VAL   245 1852     1964    1983   -417  232  - 5 5
ATOM    1726 CA  VAL   245  8.090   13.352  62.970  1.000 17.31
ANISOU  1726 CA  VAL   245 2108     2442    2026   -125  476  - 161
ATOM    1727 CB  VAL   245  6.939   14.169  62.360  1.000 17.33
ANISOU  1727 CB  VAL   245 2094     2473    2019    -80  340  - 4 7 7
ATOM    1728 CG1 VAL   245  6.551   15.334  63.286  1.000 25.25
ANISOU  1728 CG1 VAL   245 2217     2966    4410   -137 1939 -1 2 4 8
ATOM    1729 CG2 VAL   245  7.252   14.713  60.966  1.000 21.49
ANISOU  1729 CG2 VAL   245 3070     2538    2556   -180  313  2 7 1
ATOM    1730 C   VAL   245  7.682   12.768  64.327  1.000 18.29
ANISOU  1730 C   VAL   245 2123     2689    2137   -443  508  - 7 1
ATOM    1731 O   VAL   245  6.765   11.945  64.429  1.000 18.62
ANISOU  1731 O   VAL   245 1810     2174    3089    -15  451  2 5 4
ATOM    1732 N   ALA   246  8.385   13.202  65.369  1.000 21.54
ANISOU  1732 N   ALA   246 2813     3045    2327   -591 -407 9 0 7
ATOM    1733 CA  ALA   246  8.133   12.701  66.719  1.000 25.10
ANISOU  1733 CA  ALA   246 4596     2562    2379     94 -225  9 9 7
ATOM    1734 CB  ALA   246  9.424   12.723  67.537  1.000 29.82
ANISOU  1734 CB  ALA   246 5381     3408    2540    402  -889 1 3 2 5
ATOM    1735 C   ALA   246  7.080   13.545  67.412  1.000 31.20
ANISOU  1735 C   ALA   246 5079     4143    2632    314  280  4 2 8
ATOM    1736 O   ALA   246  6.876   14.714  67.052  1.000 32.39
ANISOU  1736 O   ALA   246 4706     3748    3853    567 1247 - 6 6
ATOM    1737 N   ALA   247  6.429   12.973  68.413  1.000 37.30
ANISOU  1737 N   ALA   247 5548     5498    3126     92  640 8 3 5
ATOM    1738 CA  ALA   247  5.585   13.794  69.271  1.000 40.42
ANISOU  1738 CA  ALA   247 5434     6048    3878     15 1313  8 5 0
ATOM    1739 C   ALA   247  6.289   14.132  70.578  1.000 42.17
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ANISOU 1739 C    ALA  247 6495      5891    3636    -823  1720 3 4 1
ATOM   1740 O    ALA  247 7.048    13.338  71.136  1.000 41.63
ANISOU 1740 O    ALA  247 5811      6371    3637   -1631  804   4 2 5
ATOM   1741 CB   ALA  247 4.280    13.067  69.525  1.000 47.17
ANISOU 1741 CB   ALA  247 5186      9059    3676    -520  523  2 6 8 3
ATOM   1742 N    SER  257 1.781    21.848  70.382  1.000 31.02
ANISOU 1742 N    SER  257 4109      5558    2119     137  -235 - 8 1 0
ATOM   1743 CA   SER  257 1.214    21.932  69.052  1.000 27.01
ANISOU 1743 CA   SER  257 2792      5165    2304     109  -143 - 7 0 7
ATOM   1744 CB   SER  257 0.039    22.914  68.992  1.000 28.16
ANISOU 1744 CB   SER  257 2655      4473    3572    -238   -90  - 1 0 7 1
ATOM   1745 OG   SER  257 0.491    24.251  69.074  1.000 51.32
ANISOU 1745 OG   SER  257 8516      4131    6853    -616 -2734 - 8 0 7
ATOM   1746 C    SER  257 2.259    22.389  68.034  1.000 26.19
ANISOU 1746 C    SER  257 2537      5064    2350    -132  -413 - 5 2 7
ATOM   1747 O    SER  257 3.286    22.988  68.352  1.000 31.47
ANISOU 1747 O    SER  257 2740      5886    3330    -435  -689 - 6 3 9
ATOM   1748 N    ARG  258 2.022    22.123  66.763  1.000 26.04
ANISOU 1748 N    ARG  258 3257      4477    2161    -238  -441 - 1 9
ATOM   1749 CA   ARG  258 2.982    22.541  65.747  1.000 25.81
ANISOU 1749 CA   ARG  258 2606      4735    2466      73  -338  - 1 9 7
ATOM   1750 C    ARG  258 2.321    22.609  64.383  1.000 18.26
ANISOU 1750 C    ARG  258 2374      2541    2021      39 83 - 8 5 4
ATOM   1751 O    ARG  258 1.288    21.967  64.131  1.000 19.23
ANISOU 1751 O    ARG  258 2600      2819    1888    -389   311  - 4 2 0
ATOM   1752 CB   ARG  258 4.188    21.592  65.664  1.000 29.78
ANISOU 1752 CB   ARG  258 3403      5052    2861     695  -552 - 5 7
ATOM   1753 CG   ARG  258 4.246    20.784  64.384  1.000 32.64
ANISOU 1753 CG   ARG  258 4358      4148    3896     146    97 - 5 6 1
ATOM   1754 CD   ARG  258 5.325    19.746  64.499  1.000 30.38
ANISOU 1754 CD   ARG  258 3812      4423    3309     -57   341  - 1 6
ATOM   1755 NE   ARG  258 6.433    19.909  63.581  1.000 29.43
ANISOU 1755 NE   ARG  258 3990      4604    2588     -22    70 5 4 2
ATOM   1756 CZ   ARG  258 6.453    19.389  62.359  1.000 25.02
ANISOU 1756 CZ   ARG  258 2540      3893    3074     304  -243 1 0 4
ATOM   1757 NH1  ARG  258 5.456    18.677  61.835  1.000 22.88
ANISOU 1757 NH1  ARG  258 2105      2607    3982     359   315  2 8 9
ATOM   1758 NH2  ARG  258 7.523    19.593  61.617  1.000 22.03
ANISOU 1758 NH2  ARG  258 2477      2775    3120    -430  -287 - 9 6 4
ATOM   1759 N    THR  259 2.927    23.415  63.527  1.000 20.17
ANISOU 1759 N    THR  259 2010      3640    2013    -743    91 - 1 0 0 1
ATOM   1760 CA   THR  259 2.485    23.505  62.138  1.000 18.33
ANISOU 1760 CA   THR  259 1801      3043    2121    -533    43 - 6 8 5
ATOM   1761 CB   THR  259 1.821    24.821  61.713  1.000 23.23
ANISOU 1761 CB   THR  259 2082      3169    3576    -384  -164 - 5 8 0
ATOM   1762 OG1  THR  259 2.839    25.830  61.681  1.000 34.27
ANISOU 1762 OG1  THR  259 2181      2562    8277    -137  -996 - 7 9 4
ATOM   1763 CG2  THR  259 0.738    25.198  62.704  1.000 25.49
ANISOU 1763 CG2  THR  259 4466      2233    2987     325   396 - 9 4 8
ATOM   1764 C    THR  259 3.702    23.352  61.222  1.000 18.44
ANISOU 1764 C    THR  259 2035      2822    2150    -753   274 - 5 8 3
ATOM   1765 O    THR  259 4.835    23.698  61.603  1.000 24.74
ANISOU 1765 O    THR  259 1961      5370    2069    -964   231 - 7 1 4
ATOM   1766 N    SER  260 3.420    22.867  60.026  1.000 16.29
ANISOU 1766 N    SER  260 1971      2352    1864    -224     2 - 7 5
ATOM   1767 CA   SER  260 4.447    22.832  58.989  1.000 17.43
ANISOU 1767 CA   SER  260 1783      2961    1879     321   -95  - 7 2
ATOM   1768 CB   SER  260 5.224    21.514  58.956  1.000 20.17
ANISOU 1768 CB   SER  260 2306      3257    2100     762  -127 3 8 8
ATOM   1769 OG   SER  260 4.416    20.392  58.698  1.000 27.09
ANISOU 1769 OG   SER  260 3651      2803    3839     426   217 5 5 4
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ATOM    1770 C    SER 260 3.832    23.062  57.614  1.000 14.52
ANISOU  1770 C    SER 260 1463     2165    1889     83 -100  - 1
ATOM    1771 O    SER 260 2.686    22.681  57.402  1.000 15.92
ANISOU  1771 O    SER 260 1513     2489    2049    -93   -1 2 5 7
ATOM    1772 N    SER 261 4.617    23.660  56.742  1.000 13.45
ANISOU  1772 N    SER 261 1489     1832    1788   -190 -120 -5 0 0
ATOM    1773 CA   SER 261 4.294    23.864  55.334  1.000 13.52
ANISOU  1773 CA   SER 261 1599     1726    1812   -204  30 -3 1 5
ATOM    1774 C    SER 261 5.209    22.943  54.545  1.000 12.45
ANISOU  1774 C    SER 261 1332     1887    1513    -42 -240 -1 6 1
ATOM    1775 O    SER 261 6.438    23.072  54.662  1.000 15.07
ANISOU  1775 O    SER 261 1344     1885    2497    -68 -331 -3 4 3
ATOM    1776 CB   SER 261 4.446    25.330  54.943  1.000 17.76
ANISOU  1776 CB   SER 261 2718     1625    2404   -399 -485 -3 1 8
ATOM    1777 OG   SER 261 4.428    25.554  53.570  1.000 27.54
ANISOU  1777 OG   SER 261 4342     3308    2814   -719 -821 9 5 5
ATOM    1778 N    VAL 262 4.623    22.045  53.782  1.000 10.90
ANISOU  1778 N    VAL 262 1215     1630    1299     41 -135  1 9
ATOM    1779 CA   VAL 262 5.393    21.031  53.026  1.000 11.61
ANISOU  1779 CA   VAL 262 1334     1634    1442    156 -103 1 7
ATOM    1780 CB   VAL 262 5.026    19.639  53.558  1.000 11.87
ANISOU  1780 CB   VAL 262 1262     1636    1614      9 -187  - 7 4
ATOM    1781 CG1  VAL 262 5.778    18.577  52.779  1.000 13.12
ANISOU  1781 CG1  VAL 262 1462     1527    1997     -2 185 5 1
ATOM    1782 CG2  VAL 262 5.262    19.564  55.062  1.000 17.08
ANISOU  1782 CG2  VAL 262 3390     1494    1604   -374 -245 3 9
ATOM    1783 C    VAL 262 5.096    21.149  51.543  1.000 11.18
ANISOU  1783 C    VAL 262 1026     1790    1431      1 -111  -1 3 8
ATOM    1784 O    VAL 262 3.939    20.969  51.127  1.000 12.76
ANISOU  1784 O    VAL 262 1064     2137    1648   -251  -84  -2 7 1
ATOM    1785 N    PHE 263 6.090    21.438  50.714  1.000  9.50
ANISOU  1785 N    PHE 263 995 1297         1316     -6 -210  -1 8 1
ATOM    1786 CA   PHE 263 5.933    21.637  49.288  1.000  9.61
ANISOU  1786 CA   PHE 263 1310     1017    1324     -6 -284  - 4 2
ATOM    1787 CB   PHE 263 6.486    23.002  48.848  1.000 10.94
ANISOU  1787 CB   PHE 263 1282     1055    1821    -50 -253 4
ATOM    1788 CG   PHE 263 6.150    23.399  47.418  1.000 10.35
ANISOU  1788 CG   PHE 263 779 1231        1921    -58   32 3 4 0
ATOM    1789 CD1  PHE 263 6.858    22.915  46.326  1.000  9.98
ANISOU  1789 CD1  PHE 263 766 1183        1841    -26 -101  2 4 0
ATOM    1790 CD2  PHE 263 5.106    24.277  47.148  1.000 11.95
ANISOU  1790 CD2  PHE 263 1229     1261    2052    245  -29  2 6 1
ATOM    1791 CE1  PHE 263 6.530    23.229  45.019  1.000 12.49
ANISOU  1791 CE1  PHE 263 1718     1173    1857     31 -370 1 3 6
ATOM    1792 CE2  PHE 263 4.769    24.601  45.836  1.000 13.12
ANISOU  1792 CE2  PHE 263 1451     1382    2151     43 -292  3 5 3
ATOM    1793 CZ   PHE 263 5.491    24.112  44.762  1.000 12.42
ANISOU  1793 CZ   PHE 263 1318     1453    1948   -138 -187 6 4 9
ATOM    1794 C    PHE 263 6.636    20.505  48.530  1.000  8.91
ANISOU  1794 C    PHE 263 1076     1085    1223    -39 -142 2 4
ATOM    1795 O    PHE 263 7.868    20.406  48.538  1.000 10.98
ANISOU  1795 O    PHE 263 1098     1233    1842   -120 -224 -1 4 5
ATOM    1796 N    PHE 264 5.856    19.691  47.812  1.000  9.19
ANISOU  1796 N    PHE 264 1089     1266    1136    -86 -105 -8 2
ATOM    1797 CA   PHE 264 6.386    18.602  46.991  1.000  9.64
ANISOU  1797 CA   PHE 264 1009     1238    1417    -56  -60  -1 2 6
ATOM    1798 CB   PHE 264 5.483    17.358  47.005  1.000  9.92
ANISOU  1798 CB   PHE 264 1209     1201    1359    -78   17 9
ATOM    1799 CG   PHE 264 5.265    16.673  48.336  1.000 11.22
ANISOU  1799 CG   PHE 264 1241     1647    1374   -121   38 7 7
ATOM    1800 CD1  PHE 264 6.292    16.236  49.139  1.000 15.38
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ANISOU 1800 CD1 PHE   264 1467       2641      1734      -225  -8 873
ATOM   1801 CD2 PHE   264 3.988   16.433   48.808   1.000 16.96
ANISOU 1801 CD2 PHE   264 1425       3252      1769      -610  -79  958
ATOM   1802 CE1 PHE   264 6.090   15.596   50.336   1.000 14.52
ANISOU 1802 CE1 PHE   264 1745       2417      1354       162   334   452
ATOM   1803 CE2 PHE   264 3.755   15.796   50.019   1.000 18.04
ANISOU 1803 CE2 PHE   264 1747       3405      1704      -590  -109 1008
ATOM   1804 CZ  PHE   264 4.817   15.354   50.779   1.000 12.52
ANISOU 1804 CZ  PHE   264 1772       1536      1449       -57   227   334
ATOM   1805 C   PHE   264 6.535   19.038   45.533   1.000 8.98
ANISOU 1805 C   PHE   264 1103        919      1392       143    81  -92
ATOM   1806 O   PHE   264 5.497   19.368   44.930   1.000 9.79
ANISOU 1806 O   PHE   264 991 1190        1540        28   105   103
ATOM   1807 N   LEU   265 7.758   19.031   44.999   1.000 8.43
ANISOU 1807 N   LEU   265 992 884 1325       173  -180   158
ATOM   1808 CA  LEU   265 7.984   19.224   43.566   1.000 8.66
ANISOU 1808 CA  LEU   265 883 1066       1339        63   -33   -76
ATOM   1809 CB  LEU   265 9.309   19.964   43.328   1.000 10.10
ANISOU 1809 CB  LEU   265 1179       1188      1469      -225  -220 248
ATOM   1810 CG  LEU   265 9.570   20.351   41.871   1.000 9.37
ANISOU 1810 CG  LEU   265 1072       1009      1478       242    25 129
ATOM   1811 CD1 LEU   265 8.725   21.522   41.408   1.000 10.80
ANISOU 1811 CD1 LEU   265 1291       1004      1811       181  -114 296
ATOM   1812 CD2 LEU   265 11.048   20.684   41.678   1.000 10.87
ANISOU 1812 CD2 LEU   265 1129       1483      1519       134    43 146
ATOM   1813 C   LEU   265 7.933   17.849   42.875   1.000 10.21
ANISOU 1813 C   LEU   265 932 1188        1760        -6   -38   -302
ATOM   1814 O   LEU   265 8.858   17.043   43.042   1.000 10.45
ANISOU 1814 O   LEU   265 1388        969      1612        84  -217   107
ATOM   1815 N   ARG   266 6.853   17.530   42.135   1.000 10.00
ANISOU 1815 N   ARG   266 1325       1069      1404      -120  -222  1 5
ATOM   1816 CA  ARG   266 6.572   16.198   41.628   1.000 10.50
ANISOU 1816 CA  ARG   266 1219       1217      1554      -294   110  -210
ATOM   1817 CB  ARG   266 5.208   15.675   42.124   1.000 10.56
ANISOU 1817 CB  ARG   266 978 1460       1574      -168  -103  -105
ATOM   1818 CG  ARG   266 4.965   15.894   43.609   1.000 11.24
ANISOU 1818 CG  ARG   266 1337       1373      1563       -40   119   206
ATOM   1819 CD  ARG   266 3.668   15.318   44.146   1.000 11.17
ANISOU 1819 CD  ARG   266 1113       1567      1564       -17   -49  -11
ATOM   1820 NE  ARG   266 2.508   15.879   43.447   1.000 9.43
ANISOU 1820 NE  ARG   266 1341       1157      1086        24  -100  -145
ATOM   1821 CZ  ARG   266 1.236   15.509   43.657   1.000 9.83
ANISOU 1821 CZ  ARG   266 1245       1194      1294       132  -159 - 1
ATOM   1822 NH1 ARG   266 0.961   14.567   44.572   1.000 11.20
ANISOU 1822 NH1 ARG   266 1208       1240      1806      -144  -454 272
ATOM   1823 NH2 ARG   266 0.225   16.048   42.975   1.000 11.08
ANISOU 1823 NH2 ARG   266 1460       1265      1484       191  -283 7 3
ATOM   1824 C   ARG   266 6.601   16.190   40.099   1.000 10.28
ANISOU 1824 C   ARG   266 1273       1089      1545      -200   -5 -167
ATOM   1825 O   ARG   266 6.027   17.109   39.519   1.000 11.05
ANISOU 1825 O   ARG   266 1254       1153      1793      -132    47 - 6 4
ATOM   1826 N   PRO   267 7.215   15.162   39.496   1.000 10.27
ANISOU 1826 N   PRO   267 1194       1239      1468       -33   130   3 2
ATOM   1827 CD  PRO   267 7.828   13.963   40.109   1.000 12.36
ANISOU 1827 CD  PRO   267 1865       1132      1697       -26  -529 -192
ATOM   1828 CA  PRO   267 7.304   15.157   38.036   1.000 10.12
ANISOU 1828 CA  PRO   267 1278       1095      1472      -129    38 -185
ATOM   1829 CB  PRO   267 8.250   13.986   37.767   1.000 11.83
ANISOU 1829 CB  PRO   267 1489       1088      1919       -72    90 -322
ATOM   1830 CG  PRO   267 8.017   13.053   38.913   1.000 10.72
ANISOU 1830 CG  PRO   267 960 1356        1755        95  -257  -187
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ATOM   1831 C   PRO 267 5.977   14.929 37.344 1.000 10.86
ANISOU 1831 C   PRO 267 1330    1226   1570   -252 47 -161
ATOM   1832 O   PRO 267 5.030   14.421 37.934 1.000 12.03
ANISOU 1832 O   PRO 267 1316    1174   2080   -258 17 7 7
ATOM   1833 N   ASN 268 5.931   15.288 36.065 1.000 10.61
ANISOU 1833 N   ASN 268 1216    1146   1670   -70 -86 -129
ATOM   1834 CA  ASN 268 4.810   14.949 35.198 1.000 11.20
ANISOU 1834 CA  ASN 268 1285    1349   1622   -167 -43 -229
ATOM   1835 CB  ASN 268 4.954   15.664 33.846 1.000 14.02
ANISOU 1835 CB  ASN 268 2160    1410   1756   132 -316 2 3
ATOM   1836 CG  ASN 268 4.992   17.175 33.992 1.000 13.03
ANISOU 1836 CG  ASN 268 1811    1393   1747   189 -355 -8 8
ATOM   1837 OD1 ASN 268 4.046   17.748 34.566 1.000 16.65
ANISOU 1837 OD1 ASN 268 1910    1744   2673   292 -1 -159
ATOM   1838 ND2 ASN 268 6.037   17.818 33.495 1.000 14.19
ANISOU 1838 ND2 ASN 268 2505    1372   1516   161 264 -172
ATOM   1839 C   ASN 268 4.705   13.446 34.968 1.000 10.88
ANISOU 1839 C   ASN 268 1294    1314   1526   -75 -226 -164
ATOM   1840 O   ASN 268 5.715   12.732 34.979 1.000 11.68
ANISOU 1840 O   ASN 268 1534    1439   1464   87 -458 -121
ATOM   1841 N   ALA 269 3.484   12.980 34.688 1.000 12.22
ANISOU 1841 N   ALA 269 1484    1428   1732   -108 -397 -427
ATOM   1842 CA  ALA 269 3.277   11.547 34.417 1.000 12.12
ANISOU 1842 CA  ALA 269 1432    1356   1819   -238 -29 -282
ATOM   1843 CB  ALA 269 1.817   11.310 34.058 1.000 12.38
ANISOU 1843 CB  ALA 269 1439    1278   1985   -228 -183 2 9
ATOM   1844 C   ALA 269 4.125   10.981 33.283 1.000 11.26
ANISOU 1844 C   ALA 269 1445    1240   1592   25 -280 -141
ATOM   1845 O   ALA 269 4.493   9.800  33.263 1.000 12.53
ANISOU 1845 O   ALA 269 1428    1249   2085   -110 108 -188
ATOM   1846 N   ASP 270 4.438   11.799 32.276 1.000 11.47
ANISOU 1846 N   ASP 270 1701    1280   1378   -261 -341 -300
ATOM   1847 CA  ASP 270 5.214   11.378 31.113 1.000 11.92
ANISOU 1847 CA  ASP 270 1826    1106   1595   19 -183 -156
ATOM   1848 CB  ASP 270 4.760   12.096 29.850 1.000 14.13
ANISOU 1848 CB  ASP 270 1733    2038   1597   84 111 2 12
ATOM   1849 CG  ASP 270 5.050   13.568 29.777 1.000 15.98
ANISOU 1849 CG  ASP 270 2309    1939   1823   418 -418 5 64
ATOM   1850 OD1 ASP 270 5.432   14.186 30.762 1.000 21.61
ANISOU 1850 OD1 ASP 270 4101    1797   2312   176 -515 1 63
ATOM   1851 OD2 ASP 270 4.880   14.152 28.674 1.000 24.64
ANISOU 1851 OD2 ASP 270 3995    3221   2145   -62 -169 1 395
ATOM   1852 C   ASP 270 6.721   11.542 31.264 1.000 12.86
ANISOU 1852 C   ASP 270 1840    1392   1654   -398 -61 3 15
ATOM   1853 O   ASP 270 7.443   11.290 30.292 1.000 14.83
ANISOU 1853 O   ASP 270 1813    2114   1709   -346 -141 4 9
ATOM   1854 N   PHE 271 7.230   11.911 32.439 1.000 11.85
ANISOU 1854 N   PHE 271 1360    1316   1824   59 -25 7 0
ATOM   1855 CA  PHE 271 8.665   11.927 32.715 1.000 11.14
ANISOU 1855 CA  PHE 271 1242    1349   1641   10 230 1 62
ATOM   1856 CB  PHE 271 8.972   12.378 34.143 1.000 12.19
ANISOU 1856 CB  PHE 271 1467    1444   1722   -96 -3 1 82
ATOM   1857 CG  PHE 271 10.385  11.992 34.597 1.000 12.77
ANISOU 1857 CG  PHE 271 1411    1640   1800   42 31 5 6
ATOM   1858 CD1 PHE 271 11.475  12.488 33.904 1.000 13.22
ANISOU 1858 CD1 PHE 271 1513    1516   1993   168 220 4 9
ATOM   1859 CD2 PHE 271 10.624  11.155 35.666 1.000 13.55
ANISOU 1859 CD2 PHE 271 1343    1674   2131   139 84 2 55
ATOM   1860 CE1 PHE 271 12.779  12.178 34.249 1.000 14.26
ANISOU 1860 CE1 PHE 271 1432    1760   2225   -39 46 -416
ATOM   1861 CE2 PHE 271 11.925  10.806 36.019 1.000 15.88
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- 151 -

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ANISOU 1861 CE2 PHE  271 1537      1818      2679      -263  -675 2 6 0
ATOM   1862 CZ  PHE  271 13.006    11.288    35.304    1.000 14.15
ANISOU 1862 CZ  PHE  271 1166      1736      2475      7   -531  - 4 6 7
ATOM   1863 C   PHE  271 9.259     10.550    32.410    1.000 11.27
ANISOU 1863 C   PHE  271 1359      1338      1585      75 271 3 4 8
ATOM   1864 O   PHE  271 8.785     9.531     32.920    1.000 12.97
ANISOU 1864 O   PHE  271 2011      1320      1596      -85    473  2 7 9
ATOM   1865 N   THR  272 10.261    10.498    31.541    1.000 11.95
ANISOU 1865 N   THR  272 1018      1503      2020      -214   300  - 115
ATOM   1866 CA  THR  272 10.823    9.254     30.992    1.000 12.70
ANISOU 1866 CA  THR  272 1615      1557      1652      132    341  1 4 6
ATOM   1867 CB  THR  272 10.679    9.281     29.450    1.000 16.79
ANISOU 1867 CB  THR  272 1814      2829      1737      -595   157  - 4 0 6
ATOM   1868 OG1 THR  272 9.301     9.471     29.090    1.000 18.02
ANISOU 1868 OG1 THR  272 1912      2921      2013      -497  -73  9 1
ATOM   1869 CG2 THR  272 11.200    7.976     28.856    1.000 17.02
ANISOU 1869 CG2 THR  272 2144      2857      1467      -475   538  - 1 9 4
ATOM   1870 C   THR  272 12.272    9.057     31.423    1.000 12.02
ANISOU 1870 C   THR  272 1436      1573      1559      92 603 1 3 7
ATOM   1871 O   THR  272 13.055    10.031    31.437    1.000 14.17
ANISOU 1871 O   THR  272 1451      1583      2351      125    602  4 1 2
ATOM   1872 N   PHE  273 12.625    7.837     31.828    1.000 12.34
ANISOU 1872 N   PHE  273 1402      1585      1703      17 378 1 5 8
ATOM   1873 CA  PHE  273 13.953    7.492     32.312    1.000 12.20
ANISOU 1873 CA  PHE  273 1362      1364      1909      -126   336  1 4 7
ATOM   1874 CB  PHE  273 13.951    7.514     33.861    1.000 12.37
ANISOU 1874 CB  PHE  273 1362      1447      1890      -102   211  - 8
ATOM   1875 CG  PHE  273 12.988    6.528     34.491    1.000 11.65
ANISOU 1875 CG  PHE  273 1398      1631      1396      -367   42 - 2 1 5
ATOM   1876 CD1 PHE  273 11.684    6.889     34.773    1.000 14.11
ANISOU 1876 CD1 PHE  273 1531      2214      1614      -336   293  - 6 2
ATOM   1877 CD2 PHE  273 13.409    5.245     34.803    1.000 13.20
ANISOU 1877 CD2 PHE  273 2024      1639      1352      -358   339  - 9
ATOM   1878 CE1 PHE  273 10.793    5.993     35.323    1.000 13.25
ANISOU 1878 CE1 PHE  273 1536      2081      1418      -98    447  4 2
ATOM   1879 CE2 PHE  273 12.530    4.329     35.327    1.000 13.39
ANISOU 1879 CE2 PHE  273 1529      1905      1654      -224   140  2 8 3
ATOM   1880 CZ  PHE  273 11.227    4.706     35.604    1.000 14.75
ANISOU 1880 CZ  PHE  273 1444      2260      1902      -90    -186 2 7 5
ATOM   1881 C   PHE  273 14.423    6.135     31.795    1.000 12.45
ANISOU 1881 C   PHE  273 1278      1526      1927      -120   317  - 3 1
ATOM   1882 O   PHE  273 13.645    5.311     31.291    1.000 11.95
ANISOU 1882 O   PHE  273 1590      1580      1370      -137   226  - 1 3
ATOM   1883 N   SER  274 15.717    5.854     31.952    1.000 12.07
ANISOU 1883 N   SER  274 1270      1640      1677      -29    558  3 5 3
ATOM   1884 CA  SER  274 16.335    4.586     31.604    1.000 14.39
ANISOU 1884 CA  SER  274 1583      1534      2349      43 707 3 8 4
ATOM   1885 CB  SER  274 17.845    4.771     31.438    1.000 14.49
ANISOU 1885 CB  SER  274 1578      1727      2202      213    695  3 2 9
ATOM   1886 OG  SER  274 18.564    3.558     31.424    1.000 14.97
ANISOU 1886 OG  SER  274 1763      1848      2078      349    348  - 1 3
ATOM   1887 C   SER  274 16.100    3.505     32.666    1.000 13.12
ANISOU 1887 C   SER  274 1670      1481      1833      8  461 1 3 7
ATOM   1888 O   SER  274 16.438    3.700     33.834    1.000 13.50
ANISOU 1888 O   SER  274 1493      1518      2116      -65    119  1 5
ATOM   1889 N   VAL  275 15.533    2.359     32.271    1.000 11.90
ANISOU 1889 N   VAL  275 1476      1618      1427      -110   490  1 9 5
ATOM   1890 CA  VAL  275 15.283    1.254     33.180    1.000 11.41
ANISOU 1890 CA  VAL  275 1708      1424      1204      -8 286 7 6
ATOM   1891 CB  VAL  275 14.346    0.198     32.543    1.000 12.74
ANISOU 1891 CB  VAL  275 1732      1300      1809      62 164 - 1 6
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ATOM    1892  CG1 VAL  275 14.157  -1.020  33.437 1.000 16.10
ANISOU  1892  CG1 VAL  275 2352     1803    1962    -614  -663 3 7 0
ATOM    1893  CG2 VAL  275 12.961   0.763  32.261 1.000 13.81
ANISOU  1893  CG2 VAL  275 1535     1786    1924     16   363 1 2 6
ATOM    1894  C   VAL  275 16.577   0.622  33.692 1.000 12.62
ANISOU  1894  C   VAL  275 1574     1628    1594     14   375 1 3 6
ATOM    1895  O   VAL  275 16.729   0.405  34.926 1.000 13.01
ANISOU  1895  O   VAL  275 1667     1643    1634      9   118 1 8 0
ATOM    1896  N   PRO  276 17.569   0.286  32.889 1.000 14.64
ANISOU  1896  N   PRO  276 1583     2066    1914      2   454 - 4 2
ATOM    1897  CD  PRO  276 17.583   0.285  31.415 1.000 15.84
ANISOU  1897  CD  PRO  276 1565     2536    1916     89   755 3 5
ATOM    1898  CA  PRO  276 18.827  -0.250  33.453 1.000 16.76
ANISOU  1898  CA  PRO  276 1667     2403    2296    261   393 - 1 6 3
ATOM    1899  CB  PRO  276 19.732  -0.503  32.236 1.000 18.27
ANISOU  1899  CB  PRO  276 1804     2568    2571    411   574 - 1 4 2
ATOM    1900  CG  PRO  276 18.868  -0.385  31.029 1.000 18.96
ANISOU  1900  CG  PRO  276 2147     2763    2293    725   694 - 3 7
ATOM    1901  C   PRO  276 19.500   0.710  34.420 1.000 16.32
ANISOU  1901  C   PRO  276 1521     2342    2336    115   237 6 7
ATOM    1902  O   PRO  276 20.035   0.277  35.456 1.000 16.78
ANISOU  1902  O   PRO  276 1411     2689    2275     93  376 2 5 3
ATOM    1903  N   LEU  277 19.475   2.019  34.155 1.000 16.58
ANISOU  1903  N   LEU  277 1835     2412    2052    -15   483 1 4 8
ATOM    1904  CA  LEU  277 20.142   2.919  35.099 1.000 17.70
ANISOU  1904  CA  LEU  277 1990     2226    2511    -21   362 1 1 8
ATOM    1905  CB  LEU  277 20.298   4.277  34.425 1.000 20.20
ANISOU  1905  CB  LEU  277 2952     2292    2432     -1  -14 2 7 1
ATOM    1906  CG  LEU  277 21.048   5.359  35.186 1.000 20.86
ANISOU  1906  CG  LEU  277 2213     2221    3490    -32  -355 4 8 2
ATOM    1907  CD1 LEU  277 22.446   4.888  35.531 1.000 34.24
ANISOU  1907  CD1 LEU  277 2157     2303    8552     69 -842  2 5 8
ATOM    1908  CD2 LEU  277 21.062   6.620  34.334 1.000 31.91
ANISOU  1908  CD2 LEU  277 4745     2460    4918   -474  -572 1 1 5 0
ATOM    1909  C   LEU  277 19.411   2.989  36.430 1.000 16.55
ANISOU  1909  C   LEU  277 1975     1885    2430   -218   211 - 2 4 3
ATOM    1910  O   LEU  277 19.997   3.116  37.517 1.000 19.19
ANISOU  1910  O   LEU  277 2179     2636    2476   -617   50 1 2 2
ATOM    1911  N   ALA  278 18.080   2.905  36.386 1.000 15.48
ANISOU  1911  N   ALA  278 2008     1904    1969   -358   279 1 1 2
ATOM    1912  CA  ALA  278 17.308   2.896  37.636 1.000 14.51
ANISOU  1912  CA  ALA  278 2109     1763    1641   -309   74 1 6 7
ATOM    1913  CB  ALA  278 15.814   2.896  37.347 1.000 15.41
ANISOU  1913  CB  ALA  278 2017     1773    2064     66 301 6 2 6
ATOM    1914  C   ALA  278 17.710   1.684  38.479 1.000 14.55
ANISOU  1914  C   ALA  278 1972     1869    1689   -195  -255 7 9
ATOM    1915  O   ALA  278 17.894   1.770  39.683 1.000 13.80
ANISOU  1915  O   ALA  278 1444     2144    1655   -250  -166 8 9
ATOM    1916  N   ARG  279 17.841   0.530  37.842 1.000 13.86
ANISOU  1916  N   ARG  279 1795     1728    1742   -432  -128 1 6 9
ATOM    1917  CA  ARG  279 18.242  -0.679  38.560 1.000 15.88
ANISOU  1917  CA  ARG  279 1995     1973    2064     59  355 4 1 1
ATOM    1918  CB  ARG  279 18.204  -1.922  37.648 1.000 16.83
ANISOU  1918  CB  ARG  279 1889     1897    2609     84  544 2 5 0
ATOM    1919  CG  ARG  279 16.790  -2.323  37.291 1.000 19.63
ANISOU  1919  CG  ARG  279 2123     2196    3139    -63   233 9 1
ATOM    1920  CD  ARG  279 16.656  -3.288  36.131 1.000 27.03
ANISOU  1920  CD  ARG  279 3924     3198    3150   -603  -275 - 1 9 8
ATOM    1921  NE  ARG  279 17.236  -4.578  36.364 1.000 27.45
ANISOU  1921  NE  ARG  279 4659     2854    2915   -359   751 - 7 8 9
ATOM    1922  CZ  ARG  279 16.714  -5.717  36.779 1.000 32.85
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ANISOU 1922 CZ   ARG   279 4486      3045      4948      -475   448  -222
ATOM   1923 NH1  ARG   279 15.424   -5.874   37.089   1.000 29.96
ANISOU 1923 NH1  ARG   279 4653      2168      4562      -103   967  -678
ATOM   1924 NH2  ARG   279 17.551   -6.750   36.890   1.000 37.87
ANISOU 1924 NH2  ARG   279 4879      2436      7074      -276  3278 -824
ATOM   1925 C    ARG   279 19.628   -0.519   39.150   1.000 17.48
ANISOU 1925 C    ARG   279 2118      1653      2871      75  -8 7 0 5
ATOM   1926 O    ARG   279 19.916   -1.064   40.212   1.000 26.82
ANISOU 1926 O    ARG   279 3764      3102      3325      -1987 -1467 1383
ATOM   1927 N    GLU   280 20.538    0.189   38.505   1.000 17.73
ANISOU 1927 N    GLU   280 1983      2293      2459      109   609   3 7
ATOM   1928 CA   GLU   280 21.899    0.317   39.026   1.000 19.66
ANISOU 1928 CA   GLU   280 2049      2023      3396      125   215   7 3 7
ATOM   1929 CB   GLU   280 22.836    0.886   37.936   1.000 20.17
ANISOU 1929 CB   GLU   280 1648      2457      3560      464   138   1099
ATOM   1930 CG   GLU   280 22.964   -0.149   36.818   1.000 31.79
ANISOU 1930 CG   GLU   280 3477      4175      4427      801  1187  - 4
ATOM   1931 CD   GLU   280 23.698    0.341   35.590   1.000 39.66
ANISOU 1931 CD   GLU   280 5144      5703      4221      -64  1339  - 6
ATOM   1932 OE1  GLU   280 24.466    1.327   35.685   1.000 39.65
ANISOU 1932 OE1  GLU   280 3464      5891      5710      334   574  1639
ATOM   1933 OE2  GLU   280 23.489   -0.294   34.519   1.000 41.55
ANISOU 1933 OE2  GLU   280 5257      6747      3781      2245  -184 1 0 2
ATOM   1934 C    GLU   280 21.984    1.188   40.266   1.000 19.68
ANISOU 1934 C    GLU   280 1488      2350      3640      -566  162   4 9 0
ATOM   1935 O    GLU   280 23.031    1.142   40.958   1.000 25.69
ANISOU 1935 O    GLU   280 1871      3766      4123      231   -245 1 8 0
ATOM   1936 N    CYS   281 20.943    1.980   40.565   1.000 18.57
ANISOU 1936 N    CYS   281 1560      2609      2887      -406  -211 1 7 6
ATOM   1937 CA   CYS   281 21.098    2.762   41.806   1.000 23.83
ANISOU 1937 CA   CYS   281 3222      2647      3184      -1189 176  - 1 2 2
ATOM   1938 CB   CYS   281 21.079    4.264   41.523   1.000 25.40
ANISOU 1938 CB   CYS   281 3278      2655      3718      -426  368  - 4 6
ATOM   1939 SG   CYS   281 19.587    4.904   40.763   1.000 27.05
ANISOU 1939 SG   CYS   281 3069      2914      4295      -522  -37  - 7 9 4
ATOM   1940 C    CYS   281 20.098    2.406   42.907   1.000 16.99
ANISOU 1940 C    CYS   281 1377      1604      3475      109   -6  -546
ATOM   1941 O    CYS   281 19.971    3.173   43.889   1.000 17.04
ANISOU 1941 O    CYS   281 2294      1277      2902      -204  -484 -129
ATOM   1942 N    GLY   282 19.447    1.245   42.794   1.000 15.23
ANISOU 1942 N    GLY   282 1617      1597      2572      3   -58  - 4 3 6
ATOM   1943 CA   GLY   282 18.731    0.674   43.914   1.000 15.61
ANISOU 1943 CA   GLY   282 1565      1973      2394      6   -331   - 2 6 6
ATOM   1944 C    GLY   282 17.246    0.519   43.727   1.000 13.75
ANISOU 1944 C    GLY   282 1635      1562      2029      -270  -446 - 7 8
ATOM   1945 O    GLY   282 16.585    0.012   44.639   1.000 14.99
ANISOU 1945 O    GLY   282 1751      1630      2313      207   -242 455
ATOM   1946 N    PHE   283 16.744    1.009   42.582   1.000 12.65
ANISOU 1946 N    PHE   283 1434      1803      1570      -200  18  - 2 5 2
ATOM   1947 CA   PHE   283 15.292    0.886   42.374   1.000 11.80
ANISOU 1947 CA   PHE   283 1477      1032      1974      -15   -264 4 6
ATOM   1948 CB   PHE   283 14.839    1.890   41.295   1.000 14.13
ANISOU 1948 CB   PHE   283 2262      972  2136     109   -187  1 5 9
ATOM   1949 CG   PHE   283 14.906    3.351   41.757   1.000 12.63
ANISOU 1949 CG   PHE   283 1711      1033      2055      47  -86 9
ATOM   1950 CD1  PHE   283 13.851    3.928   42.409   1.000 13.45
ANISOU 1950 CD1  PHE   283 1697      1399      2013      -166  24  - 2 2 9
ATOM   1951 CD2  PHE   283 16.037    4.111   41.519   1.000 13.15
ANISOU 1951 CD2  PHE   283 1567      1135      2295      142   -41  - 9 9
ATOM   1952 CE1  PHE   283 13.903    5.248   42.839   1.000 15.61
ANISOU 1952 CE1  PHE   283 2111      1649      2171      -202  484  - 6 1 7
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- 154 -

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ATOM    1953 CE2 PHE  283 16.112   5.432  41.963 1.000 12.60
ANISOU  1953 CE2 PHE  283 1783    937  2068    32  -18   2 6 4
ATOM    1954 CZ  PHE  283 15.040   5.993  42.641 1.000 13.37
ANISOU  1954 CZ  PHE  283 1863    865  2352   187  -149   1 3
ATOM    1955 C   PHE  283 14.915  -0.534  41.972 1.000 11.23
ANISOU  1955 C   PHE  283 1527    974  1765    63  -172   6 5
ATOM    1956 O   PHE  283 15.471  -1.071  40.990 1.000 13.24
ANISOU  1956 O   PHE  283 1249   1428  2355   175  -120 -3 6 1
ATOM    1957 N   ASP  284 13.998  -1.130  42.712 1.000 12.31
ANISOU  1957 N   ASP  284 1607   1333  1736  -268  -312 8 7
ATOM    1958 CA  ASP  284 13.589  -2.528  42.527 1.000 12.48
ANISOU  1958 CA  ASP  284 1725   1202  1814  -148  -543 35 0
ATOM    1959 CB  ASP  284 13.159  -3.156  43.876 1.000 12.67
ANISOU  1959 CB  ASP  284 2014   1145  1656   -50  -406 13 5
ATOM    1960 CG  ASP  284 13.261  -4.667  43.909 1.000 13.40
ANISOU  1960 CG  ASP  284 2077   1171  1843   110  -419 36 3
ATOM    1961 OD1 ASP  284 13.861  -5.246  42.974 1.000 14.98
ANISOU  1961 OD1 ASP  284 1956   1094  2640   -87   11 6 0
ATOM    1962 OD2 ASP  284 12.762  -5.306  44.883 1.000 15.79
ANISOU  1962 OD2 ASP  284 2494   1539  1966  -330  -446 43 8
ATOM    1963 C   ASP  284 12.478  -2.641  41.510 1.000 10.82
ANISOU  1963 C   ASP  284 1238   1387  1487  -205   -99  12 3
ATOM    1964 O   ASP  284 11.373  -3.100  41.777 1.000 12.28
ANISOU  1964 O   ASP  284 1331   1175  2159  -209   48 19 1
ATOM    1965 N   VAL  285 12.751  -2.154  40.308 1.000 11.32
ANISOU  1965 N   VAL  285 1204   1671  1426   -93   -48   6 1
ATOM    1966 CA  VAL  285 11.748  -2.062  39.260 1.000 11.45
ANISOU  1966 CA  VAL  285 1468   1384  1500    39 -219  - 1 5
ATOM    1967 CB  VAL  285 12.153  -1.072  38.157 1.000 11.58
ANISOU  1967 CB  VAL  285 1412   1523  1465  -388  -428 - 8
ATOM    1968 CG1 VAL  285 12.278   0.362  38.679 1.000 15.02
ANISOU  1968 CG1 VAL  285 2209   1458  2040  -264  -442 - 3 2
ATOM    1969 CG2 VAL  285 13.467  -1.482  37.495 1.000 15.70
ANISOU  1969 CG2 VAL  285 1909   1443  2615  -159   309  4 4 7
ATOM    1970 C   VAL  285 11.424  -3.431  38.642 1.000 10.83
ANISOU  1970 C   VAL  285 1232   1281  1602    93 -221   1 0 8
ATOM    1971 O   VAL  285 12.267  -4.301  38.520 1.000 12.13
ANISOU  1971 O   VAL  285 1214   1192  2202   -28   300  16 2
ATOM    1972 N   SER  286 10.168  -3.523  38.248 1.000 11.09
ANISOU  1972 N   SER  286 1116   1608  1489   -76   96 7
ATOM    1973 CA  SER  286  9.558  -4.622  37.510 1.000 11.32
ANISOU  1973 CA  SER  286 1104   1479  1718   -41  -274 25 2
ATOM    1974 CB  SER  286  8.483  -5.292  38.344 1.000  9.88
ANISOU  1974 CB  SER  286 1328   1141  1285    72 -207   7 0
ATOM    1975 OG  SER  286  7.570  -4.361  38.905 1.000 11.34
ANISOU  1975 OG  SER  286 1391   1188  1729   147  -153 7 5
ATOM    1976 C   SER  286  9.019  -4.106  36.175 1.000 10.34
ANISOU  1976 C   SER  286 1127   1227  1575    28  -87 24 5
ATOM    1977 O   SER  286  7.829  -4.112  35.869 1.000 12.62
ANISOU  1977 O   SER  286 1223   2219  1353     0  -178  22 8
ATOM    1978 N   LEU  287  9.926  -3.622  35.335 1.000 12.45
ANISOU  1978 N   LEU  287 1414   1664  1653  -212    3   1 6 1
ATOM    1979 CA  LEU  287  9.654  -2.900  34.099 1.000 12.59
ANISOU  1979 CA  LEU  287 1622   1558  1605  -366   94 1 8 4
ATOM    1980 CB  LEU  287 10.145  -1.452  34.210 1.000 12.91
ANISOU  1980 CB  LEU  287 1716   1591  1597  -373  -95   2 7
ATOM    1981 CG  LEU  287  9.452  -0.590  35.264 1.000 12.96
ANISOU  1981 CG  LEU  287 1182   1848  1895  -407  -51  - 1 7 0
ATOM    1982 CD1 LEU  287 10.229   0.708  35.484 1.000 13.34
ANISOU  1982 CD1 LEU  287 1644   1108  2318   -38  -124 2 2 3
ATOM    1983 CD2 LEU  287  8.006  -0.248  34.914 1.000 14.56
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ANISOU 1983 CD2 LEU  287 1716    1548    2267    36 -550   318
ATOM   1984 C   LEU  287 10.319  -3.610  32.928  1.000 12.63
ANISOU 1984 C   LEU  287 1837    1244    1719   -233  248   354
ATOM   1985 O   LEU  287 11.529  -3.805  32.916  1.000 16.68
ANISOU 1985 O   LEU  287 1779    1998    2560   -292  390  -149
ATOM   1986 N   ASP  288 9.531   -4.045  31.950  1.000 13.91
ANISOU 1986 N   ASP  288 2080    1751    1455    4  223   227
ATOM   1987 CA  ASP  288 10.079  -4.688  30.759  1.000 15.50
ANISOU 1987 CA  ASP  288 2029    2269    1593   -122  605   153
ATOM   1988 CB  ASP  288 8.979   -5.478  30.043  1.000 17.00
ANISOU 1988 CB  ASP  288 2722    2125    1613   -250  362   - 2
ATOM   1989 CG  ASP  288 9.480   -6.452  29.014  1.000 19.30
ANISOU 1989 CG  ASP  288 2467    2980    1885    173  243  -377
ATOM   1990 OD1 ASP  288 10.447  -7.183  29.292  1.000 25.95
ANISOU 1990 OD1 ASP  288 2812    3190    3856    501 -239  -783
ATOM   1991 OD2 ASP  288 8.911   -6.508  27.907  1.000 31.76
ANISOU 1991 OD2 ASP  288 5375    4430    2260   1266 -849 -1154
ATOM   1992 C   ASP  288 10.654  -3.652  29.811  1.000 17.08
ANISOU 1992 C   ASP  288 2259    2631    1602   -263  248   534
ATOM   1993 O   ASP  288 10.197  -2.502  29.708  1.000 23.31
ANISOU 1993 O   ASP  288 4276    2268    2313   -244  -13   297
ATOM   1994 N   GLY  289 11.702  -3.966  29.049  1.000 21.26
ANISOU 1994 N   GLY  289 2748    3699    1632   -610  752   511
ATOM   1995 CA  GLY  289 12.116  -2.880  28.152  1.000 21.65
ANISOU 1995 CA  GLY  289 2842    3988    1396  -1163  71   626
ATOM   1996 C   GLY  289 13.084  -1.859  28.736  1.000 22.09
ANISOU 1996 C   GLY  289 2888    3509    1996   -738  -23   243
ATOM   1997 O   GLY  289 13.414  -1.836  29.924  1.000 20.34
ANISOU 1997 O   GLY  289 3230    2606    1891   -918  124   147
ATOM   1998 N   GLU  290 13.562  -0.952  27.869  1.000 16.48
ANISOU 1998 N   GLU  290 2665    2099    1496    5  222  -445
ATOM   1999 CA  GLU  290 14.716  -0.117  28.182  1.000 16.94
ANISOU 1999 CA  GLU  290 2470    2161    1806    81 411  -484
ATOM   2000 CB  GLU  290 15.579  0.012   26.912  1.000 20.26
ANISOU 2000 CB  GLU  290 2670    2740    2287    414  863  -239
ATOM   2001 CG  GLU  290 16.071  -1.333  26.386  1.000 24.53
ANISOU 2001 CG  GLU  290 3251    3153    2916    664 1218  -612
ATOM   2002 CD  GLU  290 16.812  -2.170  27.411  1.000 27.91
ANISOU 2002 CD  GLU  290 3019    3161    4424    989  940  -251
ATOM   2003 OE1 GLU  290 17.874  -1.747  27.917  1.000 35.13
ANISOU 2003 OE1 GLU  290 3913    4458    4975    963  -85  -877
ATOM   2004 OE2 GLU  290 16.336  -3.280  27.734  1.000 43.76
ANISOU 2004 OE2 GLU  290 6893    3257    6478    -30  -748 598
ATOM   2005 C   GLU  290 14.406  1.271   28.716  1.000 14.67
ANISOU 2005 C   GLU  290 2512    1756    1308    95 142 1 0
ATOM   2006 O   GLU  290 15.260  1.840   29.412  1.000 15.25
ANISOU 2006 O   GLU  290 2074    1969    1750    50 418  -262
ATOM   2007 N   THR  291 13.232  1.814   28.437  1.000 15.72
ANISOU 2007 N   THR  291 2173    2393    1406    78 346  -519
ATOM   2008 CA  THR  291 12.792  3.087   28.991  1.000 15.16
ANISOU 2008 CA  THR  291 2080    1845    1833   -88  631   - 15
ATOM   2009 CB  THR  291 12.766  4.226   27.956  1.000 18.67
ANISOU 2009 CB  THR  291 2724    2529    1842   -361  769   336
ATOM   2010 OG1 THR  291 11.756  4.009   26.976  1.000 22.93
ANISOU 2010 OG1 THR  291 3313    3135    2265    445   78  146
ATOM   2011 CG2 THR  291 14.096  4.306   27.213  1.000 21.82
ANISOU 2011 CG2 THR  291 3035    2126    3130    357  1450 9 0 2
ATOM   2012 C   THR  291 11.402  2.920   29.622  1.000 12.86
ANISOU 2012 C   THR  291 1863    1604    1421    47 305   219
ATOM   2013 O   THR  291 10.625  2.024   29.270  1.000 16.13
ANISOU 2013 O   THR  291 2344    1983    1804   -303  750  -431
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ATOM     2014  N    ALA   292 11.037   3.791   30.542 1.000 12.41
ANISOU   2014  N    ALA   292 1495     1363    1859    -2 256 7 7
ATOM     2015  CA   ALA   292 9.746    3.839   31.202 1.000 11.57
ANISOU   2015  CA   ALA   292 1362     1257    1779    -213  153  3 7
ATOM     2016  CB   ALA   292 9.718    2.954   32.439 1.000 12.62
ANISOU   2016  CB   ALA   292 1768     1245    1784     100  357  4
ATOM     2017  C    ALA   292 9.385    5.255   31.614 1.000 10.32
ANISOU   2017  C    ALA   292 1317     1335    1270    -181   99 5 4
ATOM     2018  O    ALA   292 10.266   6.134   31.701 1.000 10.97
ANISOU   2018  O    ALA   292 1389     1138    1641    -146  279  1 0 4
ATOM     2019  N    THR   293 8.091    5.445   31.882 1.000 12.32
ANISOU   2019  N    THR   293 1486     1547    1647    -314  563  - 2 8 4
ATOM     2020  CA   THR   293 7.626    6.715   32.421 1.000 12.28
ANISOU   2020  CA   THR   293 1717     1460    1489    -168  337  - 2 0 0
ATOM     2021  CB   THR   293 6.352    7.215   31.733 1.000 13.27
ANISOU   2021  CB   THR   293 2128     1182    1730    -258 -159 - 2 8 4
ATOM     2022  OG1  THR   293 5.317    6.237   31.911 1.000 13.85
ANISOU   2022  OG1  THR   293 1831     1217    2216       8 -131  7 4
ATOM     2023  CG2  THR   293 6.474    7.303   30.212 1.000 13.72
ANISOU   2023  CG2  THR   293 1791     1683    1738    -252  -56  - 4 0 5
ATOM     2024  C    THR   293 7.363    6.635   33.937 1.000 10.58
ANISOU   2024  C    THR   293 1439     1050    1533      12 447 9
ATOM     2025  O    THR   293 7.211    5.576   34.553 1.000 10.29
ANISOU   2025  O    THR   293 1049     1102    1758     -56   93 1 1 8
ATOM     2026  N    PHE   294 7.243    7.810   34.569 1.000 11.53
ANISOU   2026  N    PHE   294 1794     1093    1494    -307  306  - 6 6
ATOM     2027  CA   PHE   294 6.806    7.939   35.950 1.000 10.41
ANISOU   2027  CA   PHE   294 1432     1061    1463    -174  125  - 1 6 2
ATOM     2028  CB   PHE   294 6.709    9.426   36.336 1.000 12.25
ANISOU   2028  CB   PHE   294 1930     1030    1694    -164  292  - 6 4
ATOM     2029  CG   PHE   294 6.270    9.658   37.770 1.000 12.77
ANISOU   2029  CG   PHE   294 1880     1136    1837    -103  178  - 4 2 7
ATOM     2030  CD1  PHE   294 7.123    9.462   38.839 1.000 14.73
ANISOU   2030  CD1  PHE   294 1976     1893    1727    -539  161  - 1 3 2
ATOM     2031  CD2  PHE   294 4.989   10.068   38.056 1.000 16.59
ANISOU   2031  CD2  PHE   294 2180     1923    2199     348  386  - 4 9 2
ATOM     2032  CE1  PHE   294 6.726    9.673   40.144 1.000 14.36
ANISOU   2032  CE1  PHE   294 1598     2028    1830    -505  280  - 1 1 8
ATOM     2033  CE2  PHE   294 4.575   10.275   39.345 1.000 16.75
ANISOU   2033  CE2  PHE   294 2214     2062    2087     692  144  - 6 0 2
ATOM     2034  CZ   PHE   294 5.426   10.065   40.413 1.000 15.17
ANISOU   2034  CZ   PHE   294 2040     1426    2296     327   97 - 1 3 5
ATOM     2035  C    PHE   294 5.484    7.195   36.172 1.000 10.89
ANISOU   2035  C    PHE   294 1401     1200    1536    -155   78 1 3 7
ATOM     2036  O    PHE   294 5.325    6.425   37.125 1.000 10.67
ANISOU   2036  O    PHE   294 1396     1297    1360      90 337 1 0 5
ATOM     2037  N    GLN   295 4.487    7.355   35.299 1.000 10.62
ANISOU   2037  N    GLN   295 1399     1187    1450     -18   88 - 2 4
ATOM     2038  CA   GLN   295 3.217    6.612   35.393 1.000 11.31
ANISOU   2038  CA   GLN   295 1433     1205    1660     -96  120  - 3 2 1
ATOM     2039  CB   GLN   295 2.284    7.053   34.254 1.000 11.66
ANISOU   2039  CB   GLN   295 1425     1053    1953     -25   63 - 1 4 1
ATOM     2040  CG   GLN   295 0.951    6.360   34.200 1.000 11.05
ANISOU   2040  CG   GLN   295 1573     1011    1614     -93 -118 1 8
ATOM     2041  CD   GLN   295 0.052    6.843   33.087 1.000 11.35
ANISOU   2041  CD   GLN   295 1592     1326    1395     173   57 - 1 3
ATOM     2042  OE1  GLN   295 0.349    7.823   32.378 1.000 15.06
ANISOU   2042  OE1  GLN   295 2306     1589    1825 -   110    7  3 7 9
ATOM     2043  NE2  GLN   295 -1.053   6.153   32.914 1.000 13.90
ANISOU   2043  NE2  GLN   295 1511     1757    2015     156 -282 2 0 8
ATOM     2044  C    GLN   295 3.412    5.107   35.389 1.000 10.12
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ANISOU 2044 C    GLN 295 1154     1203     1486     21 160 - 191
ATOM   2045 O    GLN 295 2.827    4.309    36.128   1.000 11.82
ANISOU 2045 O    GLN 295 1264     1542     1686     -107 41 137
ATOM   2046 N    ASP 296 4.267    4.558    34.538   1.000 9.35
ANISOU 2046 N    ASP 296 1076     1056     1422     -118 -76 - 275
ATOM   2047 CA   ASP 296 4.655    3.172    34.416   1.000 9.91
ANISOU 2047 CA   ASP 296 1241     1139     1387     56 60 - 243
ATOM   2048 CB   ASP 296 5.699    2.852    33.347   1.000 10.26
ANISOU 2048 CB   ASP 296 1315     1156     1429     113  132  - 36
ATOM   2049 CG   ASP 296 5.343    2.981    31.885   1.000 11.42
ANISOU 2049 CG   ASP 296 1357     1578     1405     358  121  - 199
ATOM   2050 OD1  ASP 296 4.143    2.904    31.531   1.000 13.82
ANISOU 2050 OD1  ASP 296 1511     1744     1997     149  -209 - 62
ATOM   2051 OD2  ASP 296 6.282    3.151    31.047   1.000 13.48
ANISOU 2051 OD2  ASP 296 1802     1758     1564     228  364  7 3
ATOM   2052 C    ASP 296 5.175    2.682    35.770   1.000 10.31
ANISOU 2052 C    ASP 296 1416     1141     1361     16 91 - 198
ATOM   2053 O    ASP 296 4.852    1.551    36.197   1.000 11.40
ANISOU 2053 O    ASP 296 1428     1452     1453     -288 32 3 5
ATOM   2054 N    TRP 297 6.004    3.484    36.441   1.000 10.88
ANISOU 2054 N    TRP 297 1752     1144     1238     -161 11 5 5
ATOM   2055 CA   TRP 297 6.646    3.104    37.685   1.000 11.26
ANISOU 2055 CA   TRP 297 1768     1215     1294     -217 -57  4 5
ATOM   2056 CB   TRP 297 7.899    3.999    37.890   1.000 10.31
ANISOU 2056 CB   TRP 297 1387     1417     1112     -87  213  1 2 0
ATOM   2057 CG   TRP 297 8.621    3.651    39.172   1.000 10.98
ANISOU 2057 CG   TRP 297 1456     1394     1324     164  -29  - 43
ATOM   2058 CD2  TRP 297 9.082    4.534    40.202   1.000 12.49
ANISOU 2058 CD2  TRP 297 1255     1729     1761     75 -298  - 197
ATOM   2059 CE2  TRP 297 9.692    3.755    41.201   1.000 16.08
ANISOU 2059 CE2  TRP 297 1860     2049     2202     -294 -977 4 9
ATOM   2060 CE3  TRP 297 9.040    5.910    40.379   1.000 17.41
ANISOU 2060 CE3  TRP 297 2778     1740     2096     -388 -916 - 234
ATOM   2061 CD1  TRP 297 8.969    2.400    39.589   1.000 13.58
ANISOU 2061 CD1  TRP 297 1617     1518     2025     0  -664  1 1 4
ATOM   2062 NE1  TRP 297 9.614    2.444    40.808   1.000 16.12
ANISOU 2062 NE1  TRP 297 2165     1909     2051     -22  -873 2 2 0
ATOM   2063 CZ2  TRP 297 10.243   4.320    42.341   1.000 19.85
ANISOU 2063 CZ2  TRP 297 2756     2383     2404     -951 -1337 2 6 7
ATOM   2064 CZ3  TRP 297 9.586    6.466    41.515   1.000 23.40
ANISOU 2064 CZ3  TRP 297 4215     2030     2645     -1001 -1757 - 7 7
ATOM   2065 CH2  TRP 297 10.181   5.670    42.486   1.000 21.51
ANISOU 2065 CH2  TRP 297 3178     2457     2537     -910 -1473 - 5 1
ATOM   2066 C    TRP 297 5.700    3.138    38.882   1.000 10.39
ANISOU 2066 C    TRP 297 1172     1448     1329     -280 -237 39 1
ATOM   2067 O    TRP 297 5.574    2.159    39.639   1.000 13.52
ANISOU 2067 O    TRP 297 1748     1830     1557     32 -91 7 0 3
ATOM   2068 N    ILE 298 5.033    4.272    39.079   1.000 12.08
ANISOU 2068 N    ILE 298 1400     1710     1480     -49   83 451
ATOM   2069 CA   ILE 298 4.223    4.521    40.272   1.000 13.43
ANISOU 2069 CA   ILE 298 1301     2484     1317     -199 -158 - 33
ATOM   2070 CB   ILE 298 4.370    5.988    40.689   1.000 16.97
ANISOU 2070 CB   ILE 298 1877     2908     1661     -1000 214  - 630
ATOM   2071 CG2  ILE 298 3.538    6.423    41.876   1.000 22.01
ANISOU 2071 CG2  ILE 298 3980     3121     1263     -233 546  - 339
ATOM   2072 CG1  ILE 298 5.847    6.253    41.037   1.000 27.10
ANISOU 2072 CG1  ILE 298 2588     5151     2557     -2140 -708 9 7
ATOM   2073 CD1  ILE 298 6.365    5.522    42.266   1.000 43.13
ANISOU 2073 CD1  ILE 298 5185     8299     2904     -3717 -3055 7 0 8
ATOM   2074 C    ILE 298 2.772    4.116    40.131   1.000 10.94
ANISOU 2074 C    ILE 298 1350     1652     1156     -165 -79  9 6
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ATOM    2075 O    ILE  298  2.137   3.844  41.155 1.000 12.67
ANISOU  2075 O    ILE  298 1689    1634    1493   -102   212   3 5 2
ATOM    2076 N    GLY  299  2.267   4.077  38.897 1.000 10.14
ANISOU  2076 N    GLY  299 1412    1057    1384    -51  -377 2 0 1
ATOM    2077 CA   GLY  299  0.866   3.822  38.695 1.000 10.72
ANISOU  2077 CA   GLY  299 1335    1084    1655     0   -229  - 2 0 6
ATOM    2078 C    GLY  299  0.049   5.054  38.369 1.000 12.05
ANISOU  2078 C    GLY  299 1422    1293    1864    105   -292 0
ATOM    2079 O    GLY  299  0.585   6.088  37.976 1.000 13.11
ANISOU  2079 O    GLY  299 1917    1199    1866    174    80  - 2 3
ATOM    2080 N    GLY  300 -1.268   4.931  38.490 1.000 13.92
ANISOU  2080 N    GLY  300 1393    1531    2363    182   -410 - 2 2 3
ATOM    2081 CA   GLY  300 -2.237   5.932  38.087 1.000 14.02
ANISOU  2081 CA   GLY  300 1524    1471    2331    217   -563 - 3 3 6
ATOM    2082 C    GLY  300 -2.587   7.015  39.074 1.000 11.97
ANISOU  2082 C    GLY  300 940 1603      2004     67   -488  - 2 9 5
ATOM    2083 O    GLY  300 -3.322   7.950  38.722 1.000 10.90
ANISOU  2083 O    GLY  300 1219    1408    1515    -37   -203 - 1 3 4
ATOM    2084 N    ASN  301 -2.090   6.910  40.285 1.000 11.64
ANISOU  2084 N    ASN  301 948 1557      1917    -383  -327  1 6 5
ATOM    2085 CA   ASN  301 -2.195   7.915  41.323 1.000 13.39
ANISOU  2085 CA   ASN  301 1626    1904    1557   -191   -403 1 8 3
ATOM    2086 CB   ASN  301 -3.047   7.301  42.427 1.000 17.60
ANISOU  2086 CB   ASN  301 1391    2869    2426    -9 326 2 2 8
ATOM    2087 CG   ASN  301 -4.021   8.196  43.108 1.000 19.15
ANISOU  2087 CG   ASN  301 2549    2827    1900    805    59 3 7 7
ATOM    2088 OD1  ASN  301 -5.072   8.606  42.591 1.000 15.47
ANISOU  2088 OD1  ASN  301 1258    2340    2280   -253   339  - 8
ATOM    2089 ND2  ASN  301 -3.661   8.510  44.367 1.000 29.28
ANISOU  2089 ND2  ASN  301 3585    4783    2758   1521   -850 - 8 8 5
ATOM    2090 C    ASN  301 -0.862   8.331  41.914 1.000 11.31
ANISOU  2090 C    ASN  301 1436    1669    1194    1  1  - 1 6 8
ATOM    2091 O    ASN  301 -0.033   7.456  42.221 1.000 12.03
ANISOU  2091 O    ASN  301 1483    1548    1542   -151   -279 8 2
ATOM    2092 N    TYR  302 -0.634   9.628  42.133 1.000 11.53
ANISOU  2092 N    TYR  302 1186    1584    1611    -61    26 1 0 2
ATOM    2093 CA   TYR  302  0.573  10.046  42.838 1.000 11.90
ANISOU  2093 CA   TYR  302 1260    1395    1865     5   -212  2 2 5
ATOM    2094 CB   TYR  302  0.657  11.589  43.036 1.000 13.14
ANISOU  2094 CB   TYR  302 1768    1404    1820   -273   190  1 8 1
ATOM    2095 CG   TYR  302  1.082  12.287  41.750 1.000 10.88
ANISOU  2095 CG   TYR  302 1395    1347    1393   -321    2  - 1 5 3
ATOM    2096 CD1  TYR  302  2.421  12.439  41.413 1.000 11.29
ANISOU  2096 CD1  TYR  302 1385    1246    1659    -58    98 - 4 6
ATOM    2097 CE1  TYR  302  2.859  13.075  40.248 1.000 10.60
ANISOU  2097 CE1  TYR  302 1055    1241    1732    -11    52 - 1
ATOM    2098 CD2  TYR  302  0.161  12.793  40.858 1.000 11.30
ANISOU  2098 CD2  TYR  302 1304    1332    1656   -145   105  - 2 6
ATOM    2099 CE2  TYR  302  0.573  13.406  39.690 1.000 11.72
ANISOU  2099 CE2  TYR  302 1013    1733    1708   -288   -138 1 6 1
ATOM    2100 CZ   TYR  302  1.907  13.551  39.375 1.000 10.35
ANISOU  2100 CZ   TYR  302 1009    1214    1709   -229   -50  - 1 9
ATOM    2101 OH   TYR  302  2.284  14.153  38.202 1.000 11.82
ANISOU  2101 OH   TYR  302 1192    1532    1766    -8 102 1 0 4
ATOM    2102 C    TYR  302  0.654   9.349  44.196 1.000 12.45
ANISOU  2102 C    TYR  302 1517    1450    1765   -181   -202 2 1 7
ATOM    2103 O    TYR  302 -0.375   9.230  44.878 1.000 13.55
ANISOU  2103 O    TYR  302 1464    1925    1759   -339   -211 7
ATOM    2104 N    VAL  303  1.868   8.967  44.542 1.000 12.06
ANISOU  2104 N    VAL  303 1517    1653    1413   -135   -3 3 4 0
ATOM    2105 CA   VAL  303  2.309   8.430  45.820 1.000 11.88
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ANISOU 2105 CA  VAL 303 1434      1609      1471      -368  -197 2 2 3
ATOM   2106 CB  VAL 303 2.755   6.967  45.736  1.000 14.57
ANISOU 2106 CB  VAL 303 1395      1682      2459      -217  -918 3 1 2
ATOM   2107 CG1 VAL 303 3.131   6.462  47.132  1.000 17.33
ANISOU 2107 CG1 VAL 303 2644      1608      2331      -48  -1114 6 1
ATOM   2108 CG2 VAL 303 1.703   6.041  45.122  1.000 14.80
ANISOU 2108 CG2 VAL 303 1876      1676      2069      -592  -639 3 2 2
ATOM   2109 C   VAL 303 3.467   9.328  46.303  1.000 13.88
ANISOU 2109 C   VAL 303 870 1791      2613       75  -286  - 3 7 5
ATOM   2110 O   VAL 303 4.526   9.417  45.681  1.000 19.70
ANISOU 2110 O   VAL 303 1064      2307      4114      -61   323  - 9 9 9
ATOM   2111 N   ASN 304 3.271  10.046  47.393  1.000 13.77
ANISOU 2111 N   ASN 304 1681      1815      1737      -479  -388 1 4 0
ATOM   2112 CA  ASN 304 4.205  11.077  47.828  1.000 13.37
ANISOU 2112 CA  ASN 304 1626      1240      2212      -213  -533 2 7 9
ATOM   2113 CB  ASN 304 3.460  12.223  48.566  1.000 13.24
ANISOU 2113 CB  ASN 304 1206      1454      2370      -243  -344 2 9 6
ATOM   2114 CG  ASN 304 2.457  12.922  47.667  1.000 14.16
ANISOU 2114 CG  ASN 304 1142      2326      1910       146   -88  2 3 0
ATOM   2115 OD1 ASN 304 2.776  13.283  46.540  1.000 16.65
ANISOU 2115 OD1 ASN 304 1408      2456      2464       107   185  9 1 6
ATOM   2116 ND2 ASN 304 1.263  13.126  48.209  1.000 17.45
ANISOU 2116 ND2 ASN 304 1414      2961      2257       545   181  3 1 5
ATOM   2117 C   ASN 304 5.325  10.588  48.728  1.000 11.18
ANISOU 2117 C   ASN 304 1382      1299      1566      -183  -163 1 1 2
ATOM   2118 O   ASN 304 6.396  11.232  48.699  1.000 12.07
ANISOU 2118 O   ASN 304 1325      1382      1879      -167   -66  - 5 9
ATOM   2119 N   ILE 305 5.092   9.541  49.516  1.000 12.56
ANISOU 2119 N   ILE 305 1791      1296      1685      -152  -232 2 0 2
ATOM   2120 CA  ILE 305 6.063   9.011  50.463  1.000 14.01
ANISOU 2120 CA  ILE 305 2314      1393      1614      -55   -479 7 9
ATOM   2121 CB  ILE 305 5.781   9.493  51.906  1.000 14.44
ANISOU 2121 CB  ILE 305 2223      1604      1659      -29   -217 1 5 7
ATOM   2122 CG2 ILE 305 5.725  11.017  51.956  1.000 15.31
ANISOU 2122 CG2 ILE 305 1768      1608      2441       43  -479  - 3 1 4
ATOM   2123 CG1 ILE 305 4.543   8.853  52.498  1.000 14.83
ANISOU 2123 CG1 ILE 305 1779      1694      2163       27  -307  - 1 5 3
ATOM   2124 CD1 ILE 305 4.163   9.252  53.900  1.000 28.68
ANISOU 2124 CD1 ILE 305 3788      5324      1786      -1491 381  9 2
ATOM   2125 C   ILE 305 6.059   7.487  50.389  1.000 12.79
ANISOU 2125 C   ILE 305 1703      1355      1800      -260  -586 2 3 1
ATOM   2126 O   ILE 305 5.111   6.864  49.897  1.000 15.63
ANISOU 2126 O   ILE 305 1779      1564      2597      -185  -1008 2 7 7
ATOM   2127 N   ARG 306 7.170   6.896  50.829  1.000 13.04
ANISOU 2127 N   ARG 306 1618      1389      1946      -368  -598 3 8 3
ATOM   2128 CA  ARG 306 7.340   5.435  50.868  1.000 11.82
ANISOU 2128 CA  ARG 306 1352      1366      1773      -375  -154 4 4 4
ATOM   2129 CB  ARG 306 8.111   4.965  49.640  1.000 15.28
ANISOU 2129 CB  ARG 306 1976      1941      1886      -368   -19  1 1 1
ATOM   2130 CG  ARG 306 8.203   3.472  49.395  1.000 17.16
ANISOU 2130 CG  ARG 306 2566      1953      2001      -68   -68  7 6
ATOM   2131 CD  ARG 306 8.344   3.075  47.937  1.000 19.51
ANISOU 2131 CD  ARG 306 2921      2361      2130      -397  -396 - 3 0 2
ATOM   2132 NE  ARG 306 7.078   3.198  47.212  1.000 20.65
ANISOU 2132 NE  ARG 306 2693      2844      2309      -1056 -310 2 1 4
ATOM   2133 CZ  ARG 306 6.948   3.186  45.893  1.000 17.11
ANISOU 2133 CZ  ARG 306 2006      2225      2268       45  -91  5 9 6
ATOM   2134 NH1 ARG 306 8.013   3.065  45.083  1.000 21.58
ANISOU 2134 NH1 ARG 306 2405      2677      3116      -232   381  - 6 6 9
ATOM   2135 NH2 ARG 306 5.734   3.301  45.365  1.000 17.51
ANISOU 2135 NH2 ARG 306 2235      1550      2868       150  -484 - 1 6 2
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- 160 -

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ATOM   2136 C    ARG  306 8.035    5.027   52.155 1.000 13.45
ANISOU 2136 C    ARG  306 2254    1018    1837   -246  -481 9  8
ATOM   2137 O    ARG  306 9.006    5.682   52.556 1.000 12.15
ANISOU 2137 O    ARG  306 1902    1099    1615   -18   -362 - 80
ATOM   2138 N    ARG  307 7.571    3.968   52.811 1.000 18.19
ANISOU 2138 N    ARG  307 3073    1620    2218   -734  -938 792
ATOM   2139 CA   ARG  307 8.197    3.380   53.989 1.000 19.20
ANISOU 2139 CA   ARG  307 3053    1963    2277   -675  -1236 6 43
ATOM   2140 C    ARG  307 9.086    2.191   53.611 1.000 23.08
ANISOU 2140 C    ARG  307 4018    1905    2847   -270  -1885 329
ATOM   2141 O    ARG  307 8.636    1.292   52.895 1.000 35.93
ANISOU 2141 O    ARG  307 6003    2403    5244    38 -3227 - 791
ATOM   2142 CB   ARG  307 7.131    2.918   54.997 1.000 28.25
ANISOU 2142 CB   ARG  307 5557    3297    1882   -1503 -277 509
ATOM   2143 CG   ARG  307 6.032    3.921   55.275 1.000 33.39
ANISOU 2143 CG   ARG  307 4564    4859    3261   -1613 731  2 08
ATOM   2144 CD   ARG  307 5.022    3.523   56.317 1.000 40.42
ANISOU 2144 CD   ARG  307 6335    5701    3322   -1900 1263 971
ATOM   2145 NE   ARG  307 5.605    2.952   57.529 1.000 50.83
ANISOU 2145 NE   ARG  307 8119    7287    3908   -2786 105  1624
ATOM   2146 CZ   ARG  307 4.894    2.441   58.530 1.000 51.36
ANISOU 2146 CZ   ARG  307 7424    8064    4025   -3650 -966 2451
ATOM   2147 NH1  ARG  307 3.567    2.422   58.485 1.000 69.51
ANISOU 2147 NH1  ARG  307 7586   10951    7874   -6970 -2008 3245
ATOM   2148 NH2  ARG  307 5.489    1.937   59.600 1.000 59.99
ANISOU 2148 NH2  ARG  307 10714    8150    3930   -5986 -3291 2028
ATOM   2149 N    THR  308 10.347   2.147   54.048 1.000 22.92
ANISOU 2149 N    THR  308 2759    2587    3364   -589  -200 170
ATOM   2150 CA   THR  308 11.215   1.009   53.794 1.000 24.47
ANISOU 2150 CA   THR  308 3382    2649    3268   -360   52 150
ATOM   2151 C    THR  308 10.602  -0.252   54.382 1.000 31.10
ANISOU 2151 C    THR  308 5251    2520    4044   -768   16 279
ATOM   2152 O    THR  308 10.610  -1.292   53.718 1.000 31.44
ANISOU 2152 O    THR  308 4573    2676    4696   -457  -1745 - 40
ATOM   2153 CB   THR  308 12.615   1.279   54.378 1.000 23.51
ANISOU 2153 CB   THR  308 3718    2086    3131    413  -694 542
ATOM   2154 OG1  THR  308 13.195   2.410   53.705 1.000 23.61
ANISOU 2154 OG1  THR  308 2711    2503    3754    153   437 - 9
ATOM   2155 CG2  THR  308 13.573   0.141   54.117 1.000 26.37
ANISOU 2155 CG2  THR  308 4427    2796    2796    927  -329 - 18
ATOM   2156 N    SER  309 10.066  -0.156   55.596 1.000 28.39
ANISOU 2156 N    SER  309 3759    2774    4252   -19    2  1300
ATOM   2157 CA   SER  309 9.488   -1.335   56.238 1.000 34.69
ANISOU 2157 CA   SER  309 6110    3146    3925   -1066 -1089 1626
ATOM   2158 C    SER  309 8.109   -1.737   55.724 1.000 41.41
ANISOU 2158 C    SER  309 6442    3910    5383   -2171 -1170 2144
ATOM   2159 O    SER  309 7.672   -2.884   55.952 1.000 57.05
ANISOU 2159 O    SER  309 11389    5141    5146   -4907 -2077 2027
ATOM   2160 CB   SER  309 9.450   -1.104   57.755 1.000 31.61
ANISOU 2160 CB   SER  309 4863    2958    4188   -483   368 962
ATOM   2161 OG   SER  309 8.485   -0.135   58.107 1.000 38.99
ANISOU 2161 OG   SER  309 4731    3477    6604    313  -2249 - 496
ATOM   2162 N    LYS  310 7.391   -0.868   55.032 1.000 47.69
ANISOU 2162 N    LYS  310 5502    5577    7040   -539  -1369 1583
ATOM   2163 FE   IUM  312 8.574   13.466   54.055 1.000 11.05
ANISOU 2163 FE   IUM  312 1690    1156    1351   -101  -237 7 1
ATOM   2164 C1   AKG  313 5.987   14.815   54.612 1.000 19.65
ANISOU 2164 C1   AKG  313 2777    2119    2572    258  -117 556
ATOM   2165 O1   AKG  313 4.799   15.240   54.659 1.000 20.82
ANISOU 2165 O1   AKG  313 2957    2293    2659    514  -234 264
ATOM   2166 O2   AKG  313 6.643   14.144   53.787 1.000 17.79
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ANISOU 2166 O2   AKG  313 2407     1765     2587     74 -377   4 2 9
ATOM   2167 C2   AKG  313 6.867    15.178   55.844   1.000 20.08
ANISOU 2167 C2   AKG  313 1997     2566     3068     -528  419  -3 9 9
ATOM   2168 O5   AKG  313 7.982    14.661   55.821   1.000 17.60
ANISOU 2168 O5   AKG  313 2289     2066     2334     -314  226  -2 5 2
ATOM   2169 C3   AKG  313 6.272    16.080   56.872   1.000 21.69
ANISOU 2169 C3   AKG  313 2751     1910     3581     240   62 - 3 2 7
ATOM   2170 C4   AKG  313 7.318    16.741   57.716   1.000 21.50
ANISOU 2170 C4   AKG  313 3246     1761     3160     199  -143 - 1 8 5
ATOM   2171 C5   AKG  313 6.923    17.816   58.672   1.000 22.58
ANISOU 2171 C5   AKG  313 3122     1840     3618     755  -495 - 3 1 3
ATOM   2172 O3   AKG  313 7.754    18.591   59.124   1.000 27.48
ANISOU 2172 O3   AKG  313 3581     2470     4389     -34   602  -1266
ATOM   2173 O4   AKG  313 5.660    17.889   58.999   1.000 28.55
ANISOU 2173 O4   AKG  313 3191     2809     4846     612  -246 -1148
ATOM   2174 S    SO4  401 11.676   0.439    24.942   1.000 40.14
ATOM   2175 O1   SO4  401 11.293   0.826    26.321   1.000 33.12
ATOM   2176 O2   SO4  401 12.501   -0.829   25.014   1.000 35.79
ATOM   2177 O3   SO4  401 10.430   0.189    24.129   1.000 54.89
ATOM   2178 O4   SO4  401 12.500   1.520    24.329   1.000 44.80
ATOM   2179 OW   HOH  501 -6.455   10.219   44.319   1.000 14.29
ATOM   2180 OW   HOH  502 -10.520  18.612   50.560   1.000 12.86
ATOM   2181 OW   HOH  503 -8.644   16.907   47.858   1.000 16.83
ATOM   2182 OW   HOH  504 -10.313  20.800   43.074   1.000 16.10
ATOM   2183 OW   HOH  505 -6.051   19.199   52.602   1.000 16.38
ATOM   2184 OW   HOH  506 -6.873   24.642   47.100   1.000 20.55
ATOM   2185 OW   HOH  507 10.676   -4.179   46.406   1.000 27.41
ATOM   2186 OW   HOH  508 -0.077   21.786   40.872   1.000 15.22
ATOM   2187 OW   HOH  509 5.761    13.656   46.041   1.000 17.40
ATOM   2188 OW   HOH  510 29.135   31.449   51.982   1.000 18.40
ATOM   2189 OW   HOH  511 26.032   32.724   52.741   1.000 17.03
ATOM   2190 OW   HOH  512 10.965   32.371   46.000   1.000 16.70
ATOM   2191 OW   HOH  513 23.871   24.457   58.649   1.000 18.71
ATOM   2192 OW   HOH  514 26.353   29.063   50.326   1.000 18.96
ATOM   2193 OW   HOH  515 23.191   33.106   53.153   1.000 20.41
ATOM   2194 OW   HOH  516 21.429   11.721   55.329   1.000 18.39
ATOM   2195 OW   HOH  517 9.122    15.567   53.585   1.000 24.87
ATOM   2196 OW   HOH  518 27.843   17.352   53.437   1.000 27.76
ATOM   2197 OW   HOH  519 -14.415  20.029   44.444   1.000 23.47
ATOM   2198 OW   HOH  520 15.253   33.050   51.771   1.000 27.20
ATOM   2199 OW   HOH  521 14.080   31.486   44.302   1.000 21.58
ATOM   2200 OW   HOH  522 17.770   33.842   53.596   1.000 23.56
ATOM   2201 OW   HOH  523 3.671    24.673   36.173   1.000 20.95
ATOM   2202 OW   HOH  524 -15.683  28.618   52.535   1.000 24.05
ATOM   2203 OW   HOH  525 -5.386   20.413   39.013   1.000 26.85
ATOM   2204 OW   HOH  526 10.417   27.949   58.778   1.000 28.33
ATOM   2205 OW   HOH  527 23.165   19.592   62.202   1.000 29.36
ATOM   2206 OW   HOH  528 23.736   10.550   55.737   1.000 24.02
ATOM   2207 OW   HOH  529 -1.662   28.650   42.485   1.000 21.62
ATOM   2208 OW   HOH  530 -4.689   10.177   46.511   1.000 31.65
ATOM   2209 OW   HOH  531 1.545    35.657   50.866   1.000 19.59
ATOM   2210 OW   HOH  532 0.980    22.687   36.818   1.000 30.57
ATOM   2211 OW   HOH  533 -12.450  16.848   56.071   1.000 28.42
ATOM   2212 OW   HOH  534 -9.418   16.139   51.364   1.000 22.60
ATOM   2213 OW   HOH  535 32.711   25.816   43.116   1.000 31.44
ATOM   2214 OW   HOH  536 27.068   24.587   55.468   1.000 23.32
ATOM   2215 OW   HOH  537 13.523   11.832   51.199   1.000 10.73
ATOM   2216 OW   HOH  538 8.513    16.158   35.074   1.000 12.26
ATOM   2217 OW   HOH  539 0.922    2.590    35.058   1.000 14.79
ATOM   2218 OW   HOH  540 -1.548   3.709    34.484   1.000 14.25
ATOM   2219 OW   HOH  541 11.711   16.898   30.416   1.000 17.84
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ATOM   2220 OW   HOH   542  15.389   11.536   32.065   1.000 17.88
ATOM   2221 OW   HOH   543  18.496    6.995   52.191   1.000 17.47
ATOM   2222 OW   HOH   544  19.848   22.580   35.334   1.000 17.28
ATOM   2223 OW   HOH   545  -0.387    4.787   41.967   1.000 13.22
ATOM   2224 OW   HOH   546  23.502   12.662   35.308   1.000 18.14
ATOM   2225 OW   HOH   547  10.332   25.236   33.926   1.000 19.05
ATOM   2226 OW   HOH   548  21.447   20.605   34.090   1.000 17.24
ATOM   2227 OW   HOH   549   8.164    7.685   27.077   1.000 25.40
ATOM   2228 OW   HOH   550  14.393   -5.127   40.321   1.000 15.88
ATOM   2229 OW   HOH   551  12.873   29.356   39.662   1.000 16.45
ATOM   2230 OW   HOH   552  11.974   24.144   58.426   1.000 19.71
ATOM   2231 OW   HOH   553  17.521    7.949   33.182   1.000 17.90
ATOM   2232 OW   HOH   554   3.401    2.691   43.340   1.000 23.76
ATOM   2233 OW   HOH   555  18.669   28.057   40.079   1.000 18.44
ATOM   2234 OW   HOH   556  10.827   12.928   30.017   1.000 19.57
ATOM   2235 OW   HOH   557  20.630   16.270   66.466   1.000 20.84
ATOM   2236 OW   HOH   558  11.315   20.266   64.044   1.000 21.62
ATOM   2237 OW   HOH   559  26.277   14.516   43.946   1.000 16.22
ATOM   2238 OW   HOH   560   9.616   15.488   32.365   1.000 19.40
ATOM   2239 OW   HOH   561   8.888    4.903   27.857   1.000 22.74
ATOM   2240 OW   HOH   562  20.496   -1.851   42.511   1.000 22.98
ATOM   2241 OW   HOH   563  17.033   29.415   38.332   1.000 26.36
ATOM   2242 OW   HOH   564  18.595    6.141   37.697   1.000 25.10
ATOM   2243 OW   HOH   565  22.446   13.893   31.420   1.000 29.00
ATOM   2244 OW   HOH   566   6.586    3.577   28.350   1.000 27.82
ATOM   2245 OW   HOH   567   6.250   20.077   30.961   1.000 23.27
ATOM   2246 OW   HOH   568   7.341   16.113   31.186   1.000 28.59
ATOM   2247 OW   HOH   569  16.090   32.070   42.552   1.000 33.08
ATOM   2248 OW   HOH   570  11.500   28.806   37.258   1.000 25.17
ATOM   2249 OW   HOH   571  12.901   26.768   58.591   1.000 28.58
ATOM   2250 OW   HOH   572 -17.071   17.043   50.450   1.000 28.82
ATOM   2251 OW   HOH   573  25.262    7.705   37.199   1.000 39.05
ATOM   2252 OW   HOH   574  32.884   26.440   51.734   1.000 29.03
ATOM   2253 OW   HOH   575  -1.199   19.088   42.527   1.000 14.86
ATOM   2254 OW   HOH   576  -4.389   33.026   63.392   1.000 29.56
ATOM   2255 OW   HOH   577  17.569   25.732   32.249   1.000 20.62
ATOM   2256 OW   HOH   578 -19.107   12.822   67.516   1.000 22.35
ATOM   2257 OW   HOH   579  29.333   19.198   51.975   1.000 22.51
ATOM   2258 OW   HOH   580  27.950   27.635   51.903   1.000 25.40
ATOM   2259 OW   HOH   581 -21.085   14.501   68.535   1.000 21.19
ATOM   2260 OW   HOH   582   1.529   17.378   33.953   1.000 25.29
ATOM   2261 OW   HOH   583   9.138   20.887   66.894   1.000 33.92
ATOM   2262 OW   HOH   584 -11.896   19.091   44.780   1.000 17.48
ATOM   2263 OW   HOH   585   6.382   12.597   43.347   1.000 22.09
ATOM   2264 OW   HOH   586  17.762   21.268   29.046   1.000 20.79
ATOM   2265 OW   HOH   587 -11.500   25.438   41.729   1.000 29.68
ATOM   2266 OW   HOH   588   7.877    1.046   29.689   1.000 27.70
ATOM   2267 OW   HOH   589  27.985   13.540   42.235   1.000 25.91
ATOM   2268 OW   HOH   590   1.276   14.852   34.021   1.000 20.41
ATOM   2269 OW   HOH   591  24.622   24.179   41.242   1.000 26.77
ATOM   2270 OW   HOH   592   0.404   14.096   36.006   1.000 27.92
ATOM   2271 OW   HOH   593  -2.835   36.981   57.827   1.000 31.86
ATOM   2272 OW   HOH   594   3.276    0.788   39.940   1.000 32.07
ATOM   2273 OW   HOH   595  11.025   -8.794   31.468   1.000 27.18
ATOM   2274 OW   HOH   596   6.301    2.276   42.639   1.000 29.74
ATOM   2275 OW   HOH   597  29.302   16.146   62.924   1.000 43.75
ATOM   2276 OW   HOH   598  19.039   20.964   67.011   1.000 30.85
ATOM   2277 OW   HOH   599   8.380   22.088   64.518   1.000 42.62
ATOM   2278 OW   HOH   600  21.480   10.826   34.742   1.000 25.74
ATOM   2279 OW   HOH   601  -2.907   21.956   38.566   1.000 30.92
ATOM   2280 OW   HOH   602  -3.928   29.841   43.352   1.000 43.96
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ATOM	2281	OW	HOH	603	2.885	21.563	34.437	1.000	33.10
ATOM	2282	OW	HOH	604	11.801	6.043	25.270	1.000	38.18
ATOM	2283	OW	HOH	605	-1.019	17.197	40.472	1.000	18.48
ATOM	2284	OW	HOH	606	18.382	23.349	68.110	1.000	22.54
ATOM	2285	OW	HOH	607	-8.141	8.137	45.609	1.000	17.64
ATOM	2286	OW	HOH	608	5.022	2.667	51.700	1.000	24.29
ATOM	2287	OW	HOH	609	17.557	10.755	33.490	1.000	21.94
ATOM	2288	OW	HOH	610	11.222	1.201	49.675	1.000	20.61
ATOM	2289	OW	HOH	611	4.243	35.047	50.509	1.000	22.18
ATOM	2290	OW	HOH	612	11.103	4.031	56.082	1.000	22.08
ATOM	2291	OW	HOH	613	11.366	31.522	36.791	1.000	32.32
ATOM	2292	OW	HOH	614	-21.189	24.787	52.739	1.000	31.83
ATOM	2293	OW	HOH	615	7.847	-1.491	30.674	1.000	24.77
ATOM	2294	OW	HOH	616	19.041	11.937	31.445	1.000	25.97
ATOM	2295	OW	HOH	617	6.221	29.879	40.410	1.000	29.24
ATOM	2296	OW	HOH	618	17.266	5.933	35.280	1.000	23.72
ATOM	2297	OW	HOH	619	5.983	-7.215	28.510	1.000	28.19
ATOM	2298	OW	HOH	620	22.574	8.129	57.639	1.000	30.97
ATOM	2299	OW	HOH	621	2.553	7.806	60.287	1.000	28.77
ATOM	2300	OW	HOH	622	29.939	25.812	51.234	1.000	34.00
ATOM	2301	OW	HOH	623	2.205	34.823	53.632	1.000	25.88
ATOM	2302	OW	HOH	624	18.091	13.838	67.343	1.000	28.46
ATOM	2303	OW	HOH	625	8.342	3.195	58.475	1.000	26.84
ATOM	2304	OW	HOH	626	-16.086	18.427	42.790	1.000	31.11
ATOM	2305	OW	HOH	627	-2.098	13.445	35.620	1.000	27.48
ATOM	2306	OW	HOH	628	0.481	30.471	42.834	1.000	32.55
ATOM	2307	OW	HOH	629	13.368	33.845	42.899	1.000	28.70
ATOM	2308	OW	HOH	630	-13.792	14.642	51.533	1.000	25.58
ATOM	2309	OW	HOH	631	3.299	1.461	29.242	1.000	39.62
ATOM	2310	OW	HOH	632	-16.012	20.690	46.705	1.000	27.75
ATOM	2311	OW	HOH	633	19.606	8.142	31.259	1.000	27.02
ATOM	2312	OW	HOH	634	5.077	7.954	57.205	1.000	30.59
ATOM	2313	OW	HOH	635	-1.502	6.963	45.877	1.000	35.68
ATOM	2314	OW	HOH	636	9.974	17.449	38.804	1.000	21.84
ATOM	2315	OW	HOH	637	-22.829	12.836	67.228	1.000	25.04
ATOM	2316	OW	HOH	638	6.275	34.333	39.722	1.000	25.88
ATOM	2317	OW	HOH	639	2.248	19.798	56.051	1.000	26.67
ATOM	2318	OW	HOH	640	-20.552	17.013	67.454	1.000	31.34
ATOM	2319	OW	HOH	641	9.298	16.570	28.911	1.000	29.96
ATOM	2320	OW	HOH	642	-1.732	11.113	60.074	1.000	28.13
ATOM	2321	OW	HOH	643	34.157	23.604	44.657	1.000	36.36
ATOM	2322	OW	HOH	644	24.298	20.199	33.576	1.000	34.90
ATOM	2323	OW	HOH	645	13.803	-4.667	31.570	1.000	32.66
ATOM	2324	OW	HOH	646	6.295	-2.594	29.009	1.000	34.61
ATOM	2325	OW	HOH	647	5.623	37.039	49.318	1.000	28.08
ATOM	2326	OW	HOH	648	-18.805	19.286	46.868	1.000	38.32
ATOM	2327	OW	HOH	649	16.026	35.829	49.382	1.000	34.45
ATOM	2328	OW	HOH	650	-12.187	28.769	45.330	1.000	27.36
ATOM	2329	OW	HOH	651	21.344	5.778	55.101	1.000	27.43
ATOM	2330	OW	HOH	652	-1.848	2.125	32.240	1.000	32.02
ATOM	2331	OW	HOH	653	-14.568	18.811	55.775	1.000	29.95
ATOM	2332	OW	HOH	654	-8.655	26.254	38.301	1.000	32.07
ATOM	2333	OW	HOH	655	18.836	13.542	28.102	1.000	32.24
ATOM	2334	OW	HOH	656	16.217	14.669	25.619	1.000	33.35
ATOM	2335	OW	HOH	657	28.678	14.477	38.043	1.000	30.94
ATOM	2336	OW	HOH	658	-11.834	15.408	53.330	1.000	33.25
ATOM	2337	OW	HOH	659	-1.317	38.273	59.599	1.000	34.45
ATOM	2338	OW	HOH	660	8.784	13.918	28.681	1.000	33.62
ATOM	2339	OW	HOH	661	-3.058	14.508	47.405	1.000	28.79
ATOM	2340	OW	HOH	662	10.968	33.651	38.533	1.000	36.21
ATOM	2341	OW	HOH	663	28.960	21.602	53.665	1.000	29.25

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ATOM   2342 OW   HOH   664 -10.709 26.808  39.175 1.000 42.71
ATOM   2343 OW   HOH   665 17.790  7.093   55.023 1.000 30.29
ATOM   2344 OW   HOH   666 6.404   24.865  29.848 1.000 34.55
ATOM   2345 OW   HOH   667 -15.418 19.777  58.341 1.000 33.82
ATOM   2346 OW   HOH   668 0.000   0.000   37.259 0.330 49.90
ATOM   2347 OW   HOH   669 19.652  24.610  33.660 1.000 31.77
ATOM   2348 OW   HOH   670 17.188  9.619   29.950 1.000 29.94
ATOM   2349 OW   HOH   671 17.708  2.958   28.338 1.000 34.94
ATOM   2350 OW   HOH   672 -0.059  3.652   30.079 1.000 32.23
ATOM   2351 OW   HOH   673 29.037  20.923  56.153 1.000 28.52
ATOM   2352 OW   HOH   674 -15.435 31.088  53.795 1.000 35.61
ATOM   2353 OW   HOH   675 -12.846 21.220  61.856 1.000 38.79
ATOM   2354 OW   HOH   676 10.299  39.666  49.554 1.000 40.30
ATOM   2355 OW   HOH   677 -5.921  28.822  41.521 1.000 34.01
ATOM   2356 OW   HOH   678 6.029   39.991  46.094 1.000 42.69
ATOM   2357 OW   HOH   679 35.052  23.156  52.356 1.000 40.17
ATOM   2358 OW   HOH   680 -12.008 38.355  51.601 1.000 35.18
ATOM   2359 OW   HOH   681 3.061   13.047  53.152 1.000 35.17
ATOM   2360 OW   HOH   682 1.379   2.075   27.532 1.000 46.38
ATOM   2361 OW   HOH   683 -0.516  -2.480  37.686 1.000 21.77
ATOM   2362 OW   HOH   684 4.567   10.310  43.503 1.000 24.86
ATOM   2363 OW   HOH   685 19.443  5.558   61.133 1.000 36.06
ATOM   2364 OW   HOH   686 3.205   29.499  40.656 1.000 36.99
ATOM   2365 OW   HOH   687 32.498  16.774  43.447 1.000 41.18
ATOM   2366 OW   HOH   688 28.166  23.113  57.593 1.000 35.56
ATOM   2367 OW   HOH   689 -17.023 23.220  46.759 1.000 30.05
ATOM   2368 OW   HOH   690 15.567  7.782   28.910 1.000 32.51
ATOM   2369 OW   HOH   691 11.780  30.287  57.203 1.000 33.34
ATOM   2370 OW   HOH   692 24.449  12.699  32.400 1.000 34.99
ATOM   2371 OW   HOH   693 26.200  25.005  57.918 1.000 39.38
```

CLAIMS

5   1.   Deacetoxycephalosporin C synthase (DAOCS) having a
structure designated by the X-ray co-ordinates of structure A or structure B
herein.

2.   DAOCS in the form of a complex with a metal, e.g. iron or
10   lead, and optionally in the presence of a substrate and/or a substrate
analogue or inhibitor, having a structure designated by the X-ray
co-ordinates herein.

3.   DAOCS as claimed in claim 2, wherein the substrate is
15   penicillin N, penicillin G, 2-oxoglutarate or dioxygen, and the inhibitor is
selected from N-oxalylamino acids, pyridine-carboxylates and nitrous
oxide.

4.   Use of the three-dimensional structure of DAOCS for the
20   modification of DAOCS or other related 2-oxoglutarate dependent enzyme.

5.   Use as claimed in claim 4, wherein the related 2-oxoglutarate
dependent enzyme is DACS, DAOC/DACS or the oxygenase enzyme
involved in the introduction of the 7α-methoxy group into cephamycin C.

25

6.   Use as claimed in claim 5 for the modification of DAOCS,
DACS or DAOC/DACS such that they accept unnatural substrates more
efficiently than the wild type enzymes.

30

7. Use as claimed in claim 5 for the modification of DAOCS, DACS, DAOC/DACS such that they convert natural substrates to pharmaceuticals or useful intermediates in the preparation of pharmaceuticals.

8. Use as claimed in claim 6 wherein the unnatural substrates are penicillins including penicillin G, penicillin V, 6-aminopenicillanic acid, amoxycillin, or penicillins with a phenyl glycine or p-hydroxyphenyl glycine side chain.

9. Use as claimed in claim 6 wherein the unnatural substrate is a cephalosporin.

10. Use as claimed in claim 6 wherein the unnatural substrate is an amino acid, including the proteinogenic amino acids, or a peptide.

11. Use as claimed in any one of claims 6-8, wherein penicillin G, penicillin V, another unnatural substrate or penicillin N is converted to a cephalosporin or exomethylene cephalosporin.

12. An enzyme having significant (as herein defined) sequence similarity to DAOCS wherein the side chain binding site of penicillin N or DAOC is modified and at at least one of the following sites at least one amino acid residue is changed to another amino acid residue or is deleted: Thr72, Arg74, Arg75, Glu156, Leu158, Arg160, Arg162, Leu186, Ser187, Phe225, Phe264, Arg266, Asp301, Tyr302, Val303, Asn304; and/or at least one additional amino acid residue is inserted within the region 300-311; provided that other residues interacting with the above may be changed in order to accommodate the change in one of the above; wherein the modifications:

- permit the enzyme to accept unnatural substrates; and/or
- enable the enzyme to produce unnatural products; and/or
- enhance the ability of the enzyme to produce useful products.

5   13.   An enzyme having significant (as herein defined) sequence
similarity to DAOCS wherein the penicillin/cephalosporin binding site of
penicillin N or DAOC is modified and at at least one of the following amino
acid residues is changed or deleted: Ile88, Arg160, Arg162, Phe164,
Met180, Thr190, Ile192, Phe225, Pro241, Val245, Val262, Phe264,
10   Asn 304, Ile305, Arg306, Arg307; and/or at least one additional amino
acid residue is inserted within the region 300-311; provided that other
residues interacting with the above may be changed in order to
accommodate the change in one of the above;
            wherein the modifications:
15   •   permit the enzyme to accept unnatural substrates; and/or
     •   enable the enzyme to produce unnatural products; and/or
enhance the ability of the enzyme to produce useful products.

14.   An enzyme according to claim 12 or claim 13 which is a
20   mutant of DAOCS or DACS or DAOC/DACS.

15.   An enzyme as claimed in any one of claims 12-14, wherein
both the side chain and the penicillin/cephalosporin binding sites of
penicillin N or DAOC are modified and at least one of the residues
25   specified in claims 12 and 13 is changed or deleted.

16.   An enzyme as claimed in any one of claims 12-15, wherein
two or more complementary mutations are introduced to create or delete a
binding interaction, including H-bonds, electrostatic, or hydrophobic
30   interactions.

17.   A gene encoding for the enzyme of any one of claims 12-16.

18.   A micro-organism capable of expressing the gene of claim 17
under fermentation conditions.

19.   Use of micro-organisms of claim 18 for the production of
beta-lactams of the penicillin or cephalosporin (including cepham) families.

20.   Use as claimed in claim 19 wherein the micro-organism
contains another modified enzyme of the penicillin and cephalosporin
biosynthesis pathway including isopenicillin N synthase,
amidohydrolase/acetyltransferase, or L-delta-(aminoadipoyl)-L-cysteine-D-
valine (ACV) synthetase.

21.   A method which comprises using the three-dimensional
structure of DAOCS for determining or predicting the structure of another
related 2-oxoglutarate dependent enzyme or related enzyme not from the
penicillin and cephalosporin biosynthesis pathway, and using the structural
information so obtained for modifying the other enzyme or for designing an
inhibitor for the other enzyme; wherein the said other related enzyme is
modified, by deletion or addition or alteration; at one or more of the sites
defined in claim 12 or claim 13; or using the following information for the
design of an inhibitor: Asp185, His183 and His243 act as ligands to the
iron; Arg258 and Ser260 and the Fe bind the 2-oxoglutarate; Met180,
Phe225, Leu31 and Val245 are close to the iron binding site; Tyr33,
Arg160, Arg162, Phe164, Ile192, Gln194, Leu204, Leu223, Leu215 are
important for the construction of the part of the active site binding 2-
oxoglutarate; and Arg160 and Arg162 are important for binding an amino
acid or peptide derived substrate.

22.   A method as claimed in claim 21 wherein the said other related 2-oxoglutarate dependent enzyme or related enzyme is 1-aminocylopropane-1-carboxylate oxidase, gibberellin C-20 oxidase, flavone synthase, flavanone 3β-hydroxylase, hyoscyamine 6β-hydroxylase, prolyl 4-hydroxylase, prolyl 3-hydroxylase, aspartyl hydroxylase, lysyl hydroxylase, proline hydroxylases, γ-butyrobetaine hydroxylase, enzymes in herbicide resistance mechanisms, clavaminate synthase, an oxygenase enzyme involved in the biosynthesis of carbapenems, the so called ethylene forming enzyme from *Pseudomonas syringe*, p-hydroxyphenylpyruvate dioxygenase, and an oxygenase enzyme involved in the oxidation of phytol in human liver peroxisomes.

23.   A method as claimed in claim 21 or 22, wherein the said other related enzyme is prolyl 4-hydroxylase, prolyl 3-hydroxylase, aspartyl hydroxylase, or lysyl hydroxylase and the inhibitor is to be used for the treatment of human diseases including fibrotic diseases including liver cirrhosis and arthritis.
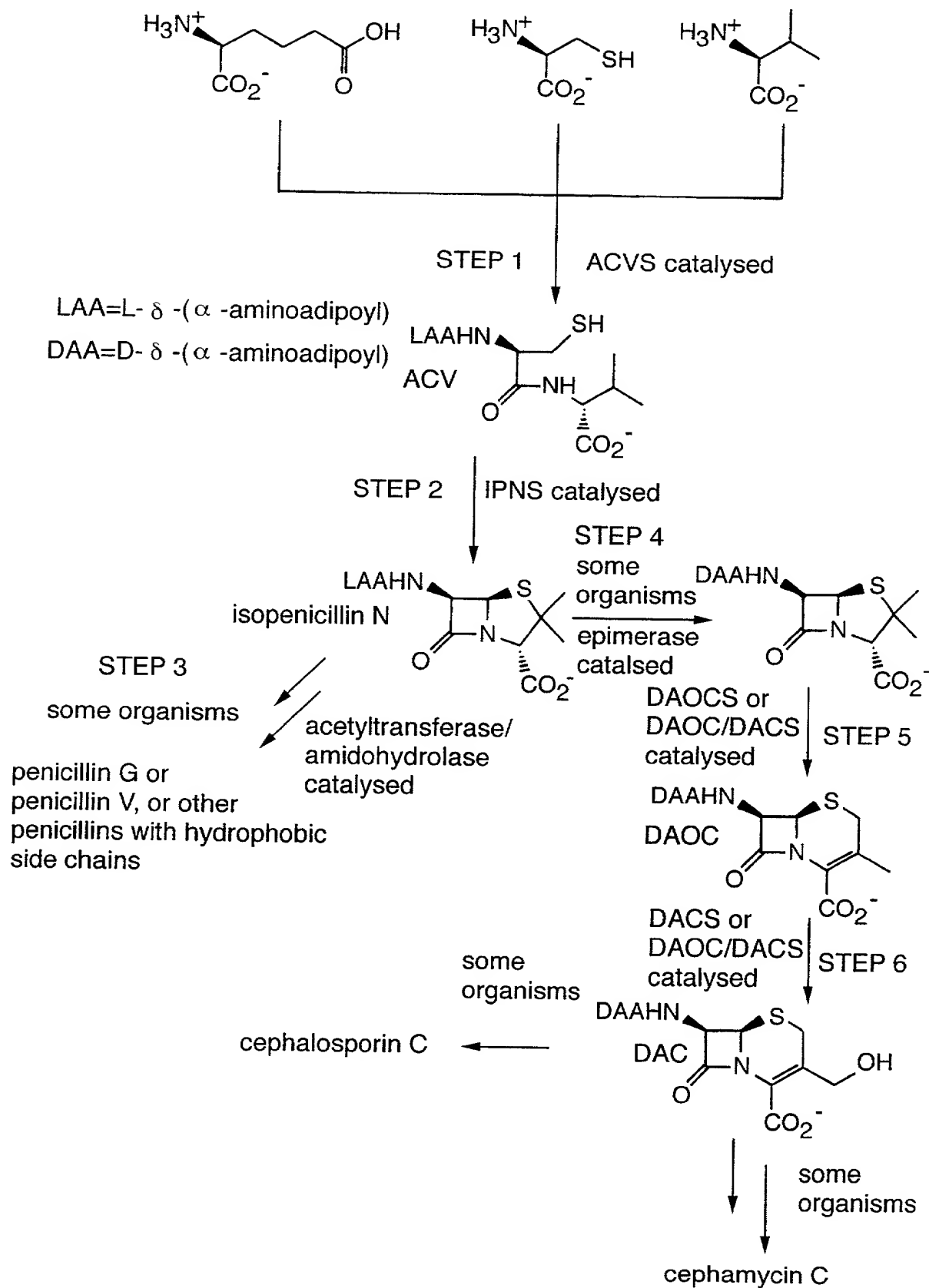
24.   A method as claimed in claim 21 or 22, wherein the said other related enzyme is p-hydroxyphenylpyruvate dioxygenase and the inhibitor is to be used in the treatment of certain genetic disorders.
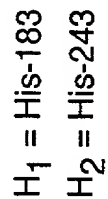
25.   A method as claimed in claim 21 or 22, wherein the said other related enzyme is involved in herbicide resistance and the information is to be used to design new herbicides to overcome the problem of resistance.

26.   An enzyme as claimed in any one of claims 12 to 16, which has modifications at at least two of the said amino acid residues.

Fig.1.

STEP 1 ACVS catalysed

LAA=L- δ -(α -aminoadipoyl)
DAA=D- δ -(α -aminoadipoyl)

ACV

STEP 2 IPNS catalysed

STEP 4
some
organisms
epimerase
catalsed

isopenicillin N

STEP 3
some organisms

acetyltransferase/
amidohydrolase
catalysed

penicillin G or
penicillin V, or other
penicillins with hydrophobic
side chains

DAOCS or
DAOC/DACS STEP 5
catalysed

DAOC

DACS or
DAOC/DACS STEP 6
catalysed

some
organisms

cephalosporin C

DAC

some
organisms

cephamycin C

Fig.2.

H₁ = His-183
H₂ = His-243

· INVENTOR DECLARATION	Attorney Docket No. P02005US0

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled "MODIFIED DEACETOXYCEPHALOSPORIN C SYNTHASE (DAOCS) AND X-RAY STRUCTURE", the specification of which

(check one)   ☐   is attached hereto.

         ☒   was filed on June 23, 2000 as PCT international application No. PCT/GB98/03860
and was amended on June 23, 2000.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

			Priority Claimed	
PCT/GB98/03860	PCT	24 Dec. 1998	☒	☐
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
9727370.0	United Kingdom	24 Dec. 1997	☒	☐
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
9813644.3	United Kingdom	24 June 1998	☒	☐
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below:

(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under Title 35, United States Code §120 of any United States application(s), or § 365(b) of any PCT international application designating the United States of America, listed below and insofar as the subject matter of each of the claims of this application is not disclosed in the prior U.S. or PCT international application in the manner provided by the first paragraph of Title 35, U.S.C. §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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5493356.1   2

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